

IG Valley, Madurai Main Road, Manikandam, Tiruchirappalli - 620012

# NAAC DOCUMENTS

**QUALITY INDICATOR FRAME WORK** 

# **CRITERION – 7**

# INSTITUTIONAL VALUES AND BEST PRACTICES

SUBMITTED BY

IQAC INTERNAL QUALITY ASSURANCE CELL INDRA GANESAN COLLEGE OF ENGINEERING



Dr. G. Balakrishnan, M.E. Ph.D., Principal

# Approved by NAAE with 184' devade 2013 & 122 Bindus Inactification by UDE

IG Valley, Modural Main Road, Manikandam, Tiruchirappelli - 620 012

Date: .....

#### TO WHOMSOEVER IT MAY CONCERN

7.1.2: The Institution has facilities and initiatives for

- 1. Alternative sources of energy and energy conservation measures
- 2. Management of the various types of degradable and non degradable waste
- 3. Water conservation
- 4. Green Campus Initiatives
- 5. Disabled friendly, barrier free environment

**Options:** 

- A. 4 or All of the above
- B. 3 of the above
- C. 2 of the above
- D. 1 of the above
- E. None of the above

Responses: Option A.4 or All of the above

Principal Dr. G. Balakrishnan, M.E., Ph.D., Principal Indra Ganesen Codege of Engineering IG Vet to Core Main Road For Science, Trichy-620 012.



#### 7.1 Institutional Values and Social Responsibilities



- **1** Alternate Sources of Energy and Energy Conservation
  - Management of the Various types of Degradable and Non-Degradable
- **3 Water Conservation**

2

- **4** Green Campus Initiatives
- **5** Disabled Friendly, Barrier Free Environment

### GEO – TAGGED PHOTOGRAPHS / VIDEOS OF THE FACILITIES



Criterion 7 Institutional Values and Best Practice 100

#### **Key Indicator 7.1 – Institutional Values and Best Practice**

#### 7.1.2: The Institution has facilities and initiatives for

- 1. Alternative sources of energy and energy conservation measures
- 2. Management of the various types of degradable and non degradable waste
- **3.** Water conservation
- 4. Green Campus Initiatives
- 5. Disabled friendly, barrier free environment

**Responses:** Option A.4 or All of the above

#### GEO –TAGGED PHOTOGRAPHS / VIDEOS OF THE FACILITIES

S.NO	Name of the Facilitates	GEO – Tagged Photos	
	Alternate Sources of Energy and Energy Conservation	Solar Panel	
1		Uninterrupted Power Supply	
		LED Lams	
		Solar Based Street Light	
		Energy Conservation – E-Vehicle	
		Diesel Generator	

#### TABLE OF CONTENTS

2	Management of the Various types of Degradable and Non-Degradable	Degradable and Non-Degradable Waste Bin	
		Chemical Waste	
		E-Waste	
		Segregation of Waste	
		Napkin Disposal Machine	
	Water Conservation	Rain Water Harvesting Pond	
		Rain Water Harvesting Pit	
		Bore Well	
3		Water Tank	
5		Water Distribution Lines	
		Reverse Osmosis Plant (RO Plant)	
		Water Purifier	
		Waste Water Recycling	
	Green Campus Initiatives	List of Trees and Samples in College Campus	
		Tree Plantation Program	
		Go Green Poster	
4		Vehicle entry Restricted	
		Say No to Plastic Poster	
		Water Conservation Poster	
		Barrier free Environmental Poster	
		College Campus Photos	
5	Disabled Friendly, Barrier Free Environment	Lift	
5		Ramp Facilities	

	Wheel Chair
	Ambulance Facilities
	Fire Extinguishers and Fire Buckets
	Disabled Friendly Washroom (Boys)
	Disabled Friendly Washroom (Girls)





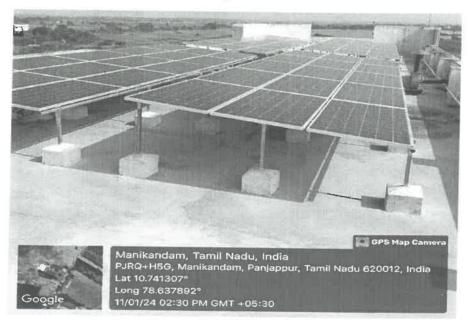
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# 1. ALTERNATIVE SOURCES OF ENERGY AND ENERGY CONSERVATION MEASURES

#### ALTERNATE SOURCES OF ENERGY AND ENERGYCONSERVATION MEASURES

#### SOLAR PANEL - 20 kW

Solar panels are a renewable energy sources that have been installed on our college campus to reduce carbon footprint and save energy costs. Solar panels can also help colleges achieve their sustainability goals and demonstrate their commitment to environmental stewardship.



#### Technical Specification for Panel: MODEL NO: KS72P320, Kirloskar Solar

- 1. Maximum Power =320Watts
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- 5. Max output power = 20,000 W
- 6. Nominal output voltage = 230/400v AC v
- 7. Max Output current = 31.9 AC a
- 8. Nominal Output frequency = 50 / 60 hz.

#### **UNITTERUPTED POWER SUPPLY (20 KVA)**

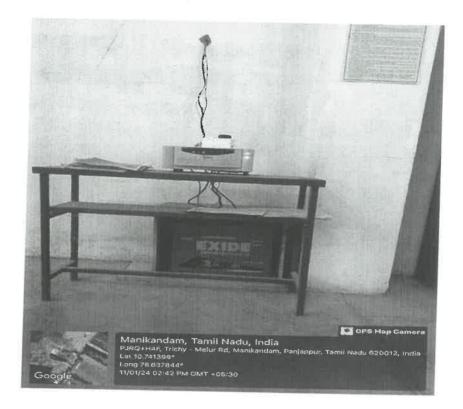


# MAIN BUILDING - (COMPUITER LAB.1)

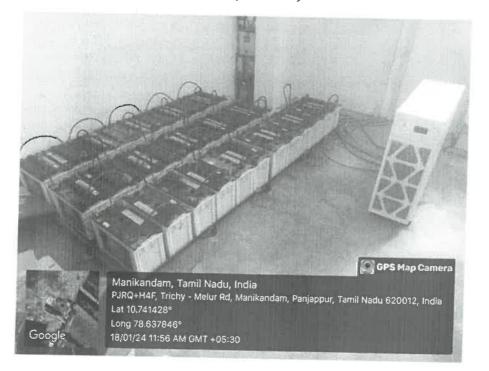
UPS systems provide continuous power backup during outages, ensuring critical operations like classroom technology, research equipment, and systems remain uninterrupted.



### MAIN BUILDING - (OFFICE - 2 KVA)



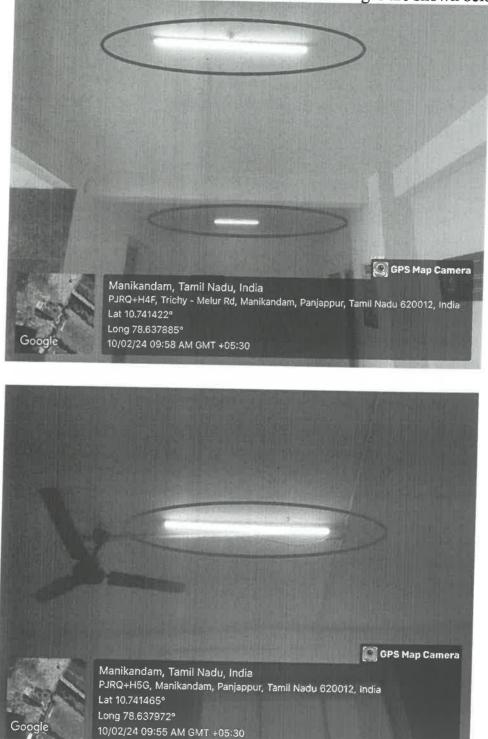
### **UNITTERUPTED POWER SUPPLY - (30 KVA)**



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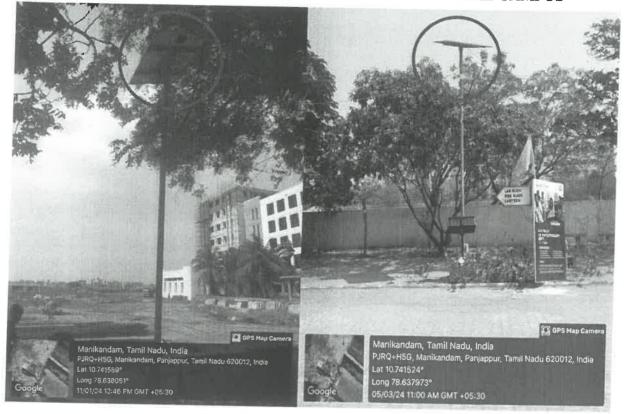
#### ENERGY CONSERVATION - LED LAMPS

In our main college LED lamps are used and some of the images are shown below.



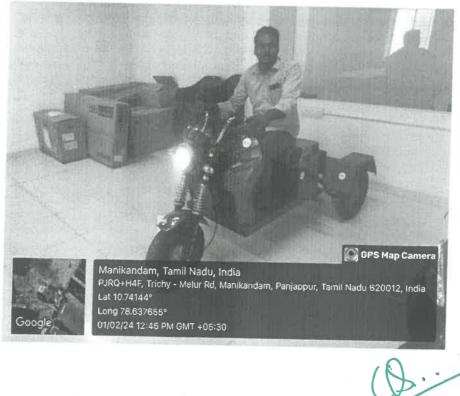
D.:-

# ENERGY CONSERVATION - SOLAR BASED STREET LIGHT IN THE CAMPUS



#### **ENERGY CONSERVATION – E-VEHICLE**

Battery Vehicles has reduced carbon foot print, improved air quality on college campus and cost savings.





#### **DIESEL GENERATOR (125 KVA)**

Diesel generators are used in our college campus to provide the continuity of options during the power outages and emergency lighting in case of emergencies.





# 7.1.2: The Institution has facilities and initiatives for

# 2. MANAGEMENT OF THE VARIOUS TYPES OF DEGRADABLE AND NON DEGRADABLE WASTE

MANAGEMENT OF THE VARIOUS TYPES OF DEGRADABLE AND NON DEGRADABLE WASTE BIN (Main Building)



DEGRADABLE AND NON DEGRADABLE WASTE BIN (Main Building – First Floor)

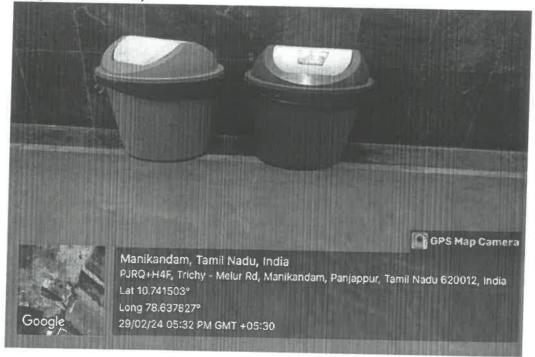


B

#### DEGRADABLE AND NON DEGRADABLE WASTE BIN (Building II – Ground Floor)



#### DEGRADABLE AND NON DEGRADABLE WASTE BIN (Building II – First Floor)



A.

#### DEGRADABLE AND NON DEGRADABLE WASTE BIN (Building II – Second Floor)



CHEMICAL WASTE



#### **E WASTE**

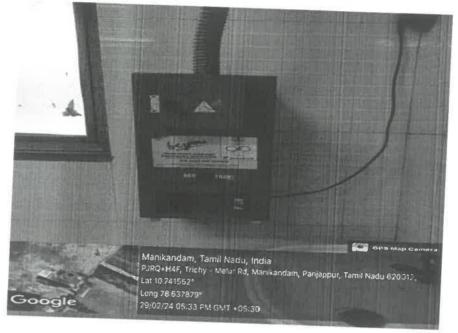


#### **Dump Yard**





#### NAPKIN DISPOSAL MACHINE - I

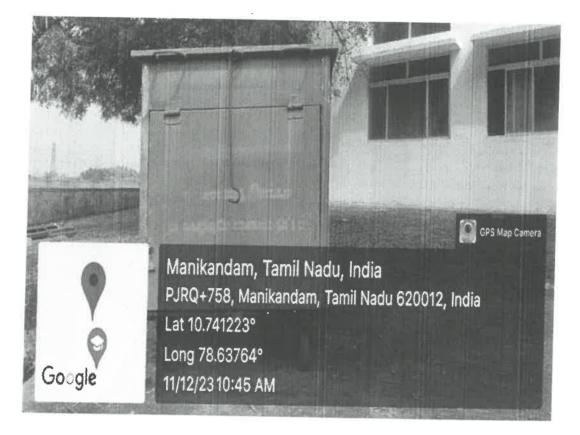


# NAPKIN DISPOSAL MACHINE - II



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#### **SEGREGATION OF WASTE**



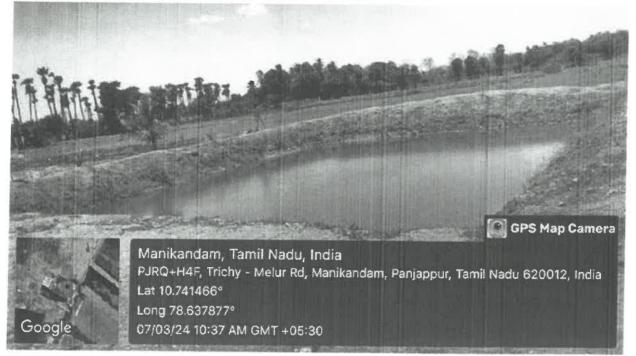




# 7.1.2: The Institution has facilities and initiatives for

**3. WATER CONSERVATION** 

#### **RAIN WATER HARVESTING POND**

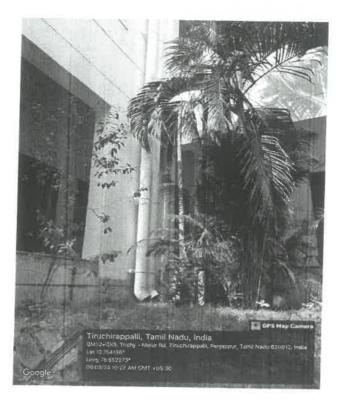


#### **RAIN WATER HARVESTING PLAN AND STRUCTURE**

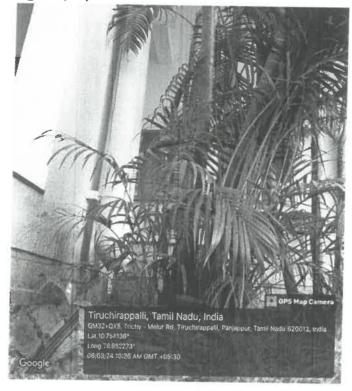
The Institution emphasizes the importance of water conservation among students and staffs. Various measures are being taken to preserve and conserve it. The huge volume of rainwater from the rooftop is collected in rain water harvesting pits that are constructed in the campus. This water stored in the pits percolates down to the ground which helps in ground water level improvement. The institute ensures that the water wastage is minimized at an optimal level and the leaky taps and pipes are under regular check and hence no loss of water is observed, neither by any leakages nor by overflow from overhead tanks. Rain water harvesting provides an independent water supply during regional restrictions the water thus collected is then used for several purposes the institution adopts sprinkler procedure in large lawns and water is very judiciously used for plantation purposes, in the extreme summer season, when water is scarce the rain water thus collected and stored in the underground tank is then used for the maintenance of the green cover in the campus.

#### **RAIN WATER HARVESTING PIT (1/5)**

Rainwater harvesting pits are an essential component of RWH systems minimize storm water runoff, and contribute to environmental sustainability. In college campus rain water harvesting pit are provided around the building.

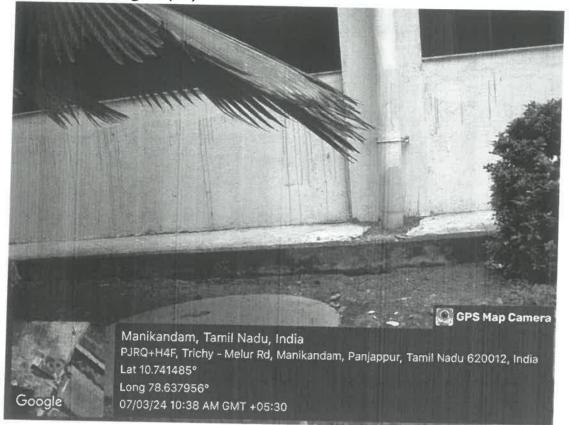


Rain Water Harvesting Pit (2/5)

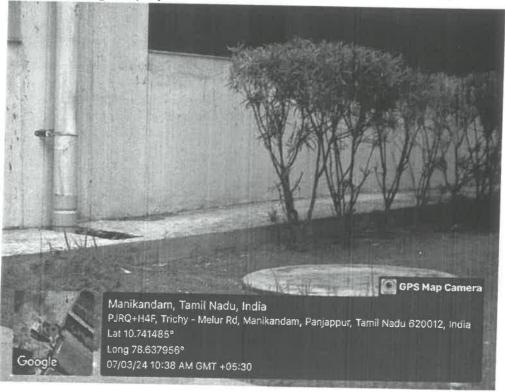


W:

#### Rain Water Harvesting Pit (3/5)



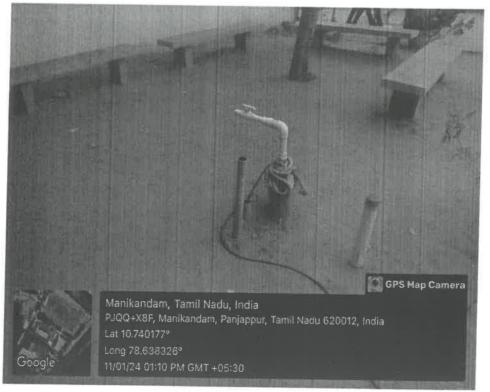
#### Rain Water Harvesting Pit (4/5)



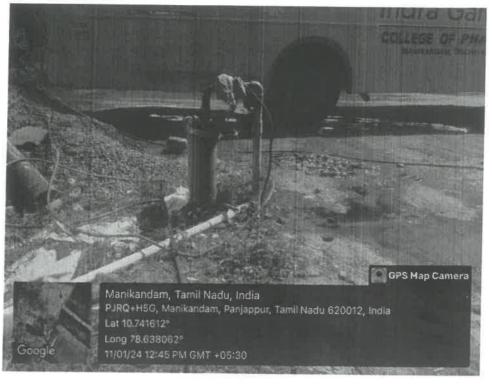
#### Rain Water Harvesting Pit (5/5)



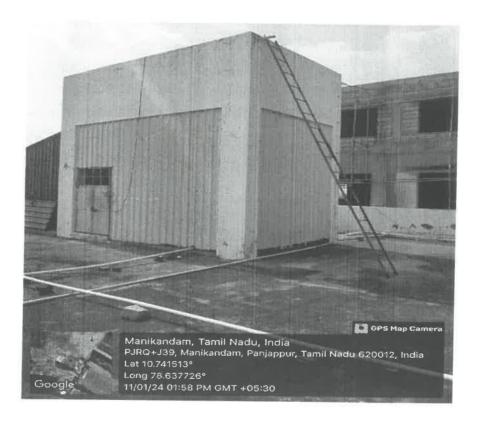
#### **BORE WELL 1**



2.



#### WATER TANK - (MAIN BUILDING)

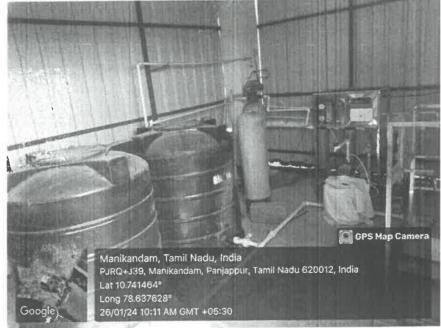




#### WATER DISTRIBUTION THROUGH PIPE LINES



#### **REVERSE OSMOSIS PLANT (RO PLANT)**



Waste Water Recycling - Drip Irrigation System





# 7.1.2: The Institution has facilities and initiatives for

4. GREEN CAMPUS INITIATIVES

LIST OF TREES AND SAPLINGS IN COLLEGE CAM
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S.NO	Trees/ Saplings Tamil Name	Trees/Saplings	Botanical	CO	UNT
		English Name	NAME	Trees	Sapling
1	Veppa Maram	Neem Tree	Azadirachta Indica	26	08
2	Naaval Maram	Java Plum or Indian Blackberry	Syzygium Cumini	38	05
3	Nochi Maram	Peacock Chaste Tree	Vitex Negundo	11	02
4	Netling Maram	Foxtail Palm	Wodyetia Bifurcata	97	15
5	Vaagai Maram	Syrrogate Tree	Albizia Lebbeck	50	17
6	Thennai Maram	Coconut Tree	Cocos Nucifera	88	18
7	Kumizh Thekku	Beechwood	Gmelina Arborea	53	11
8	Pungai Maram	Pongamia Tree	Milletia Pinnata	52	18
9	Badam Maram	Almond Tree	Prunus Dulcis	38	06
10	Malai Vemu Maram	Melia Dubia	Melila Composite Wild	8	02
11	Murungai Maram	Drumstick Tree	Moringa Oleiferea	7	04
12	Maa Maram	Mango Tree	Mangifera Indica	8	03
13	Konnai Maram	Indian laburnum Tree	Cassia Fisla	18	07
14	Nelli Maram	Gooseberry Tree	Phyllanthus Emblica	1	05
15	Thekku Maram	Teak Tree	Tectona Grandis	160	45
16	Koyya Maram	Guava Tree	Psidium Guajava	8	04
17	Pazha Maram	Jack Tree	Artocarpus Heterophyllus	2	-
18	Sapota Maram	Sapota Tree	Manilkara Zapota	6	01
19	Moongil Maram	Bamboo Tree	Bambusa vulgaris	19	09
20	Unknown			65	21
TOTAL					213

1

(D)···

### TREE PLANTATION PROGRAM ON 2022- 2023



#### **GO GREEN POSTER**



#### VEHICLE ENTRY RESTRICTED



# SAY NO TO PLASTIC POSTER ON NOTICE BOARD





### WATER CONSERVATION POSTER



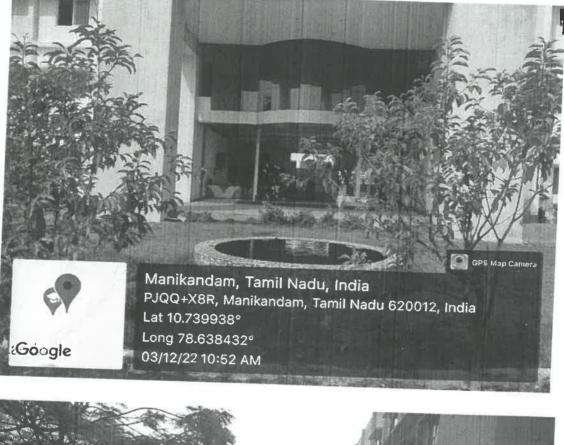
Di

# **BARRIER FREE ENVIRONMENT POSTER**





# **COLLEGE CAMPUS PHOTOS (Main Building with Garden)**



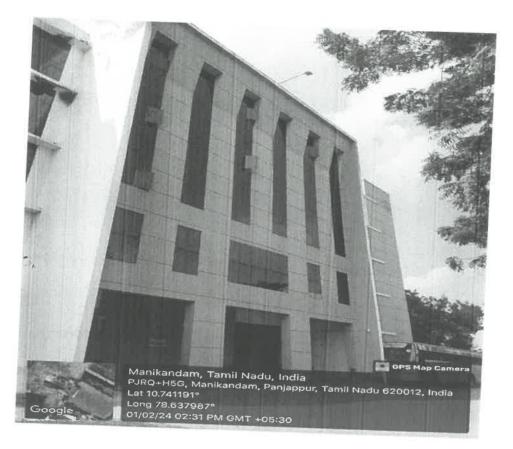
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Block - II





# 7.1.2: The Institution has facilities and initiatives for

# 5. DISABLED FRIENDLY, BARRIER FREE ENVIRONMENT

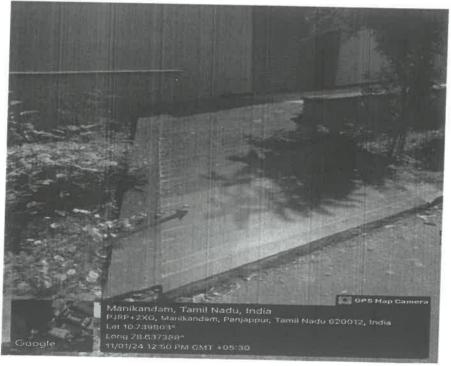
# DISABLED FRIENDLY, BARRIER FREE ENVIRONMENT

LIFT



## **Ramp Facilities**

Main building has a ramp designed for individuals with disabilities, particularly those with mobility impairments.





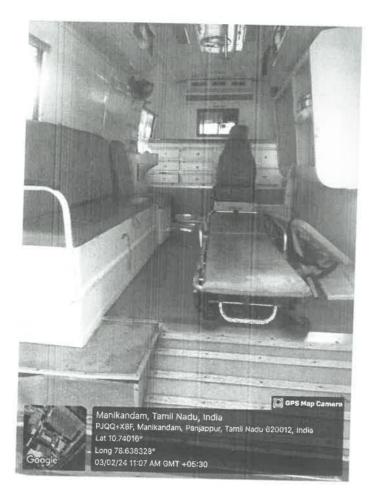
#### WHEEL CHAIR



#### **AMBULANCE FACILITIES**



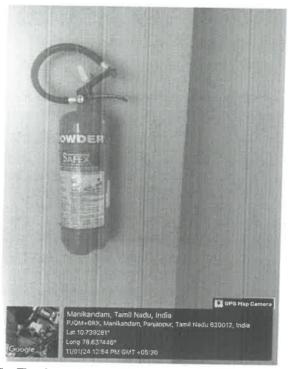
3.



# FIRE EXTIGUISHERS AND FIRE BUCKETS FIRE EXTIGUISHER (Main Building - Ground Floor)



# FIRE EXTINGUISHERS - Main Building - First Floor



FIRE EXTINGUISHERS - Engineering Building - First Floor



# FIRE EXTINGUISHERS - Engineering Building – Second Floor



FIRE EXTINGUISHERS - Engineering Building – Third Floor





# FIRE BUCKETS - MAIN BUILDING 1 (First Floor)



# FIRE BUCKETS - MAIN BUILDING 1 (Second Floor)



# DISABLED FRIENDLY WASHROOM (Gens)



# **DISABLED FRIENDLY WASHROOM (Ladies)**



.



# 7.1.2: The Institution has facilities and initiatives for

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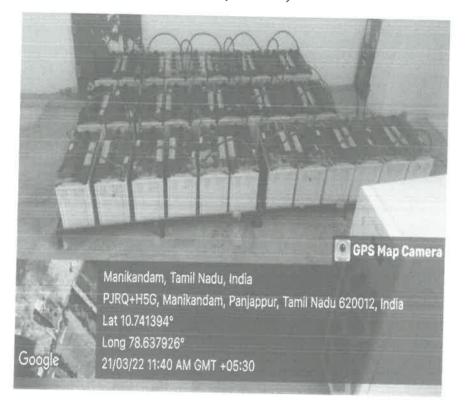


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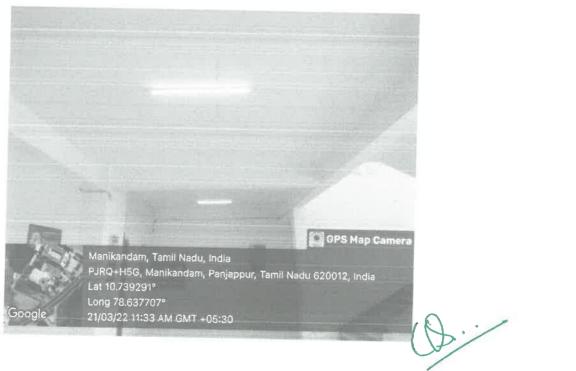
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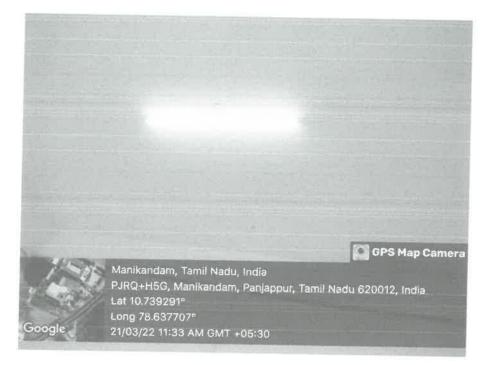
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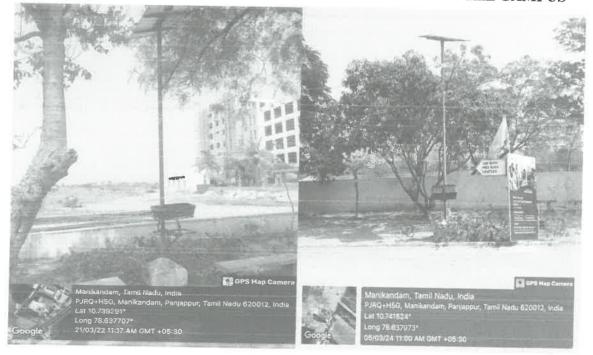
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**ENERGY CONSERVATION - SOLAR BASED STREET LIGHT IN THE CAMPUS** 



Dr. G. Balakrishnan, M.E., Ph.U.,

Principal Indra Ganesan College of Engineering IG Valley, Madurai Main Road Manikandam, Trichy-620 012.

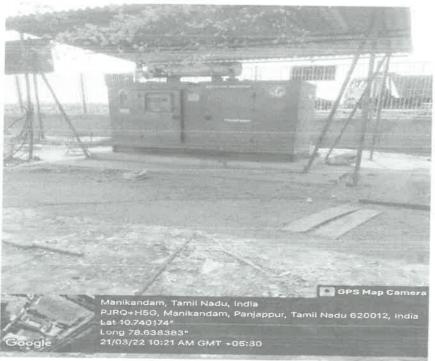
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MANAGEMENT OF THE VARIOUS TYPES OF DEGRADABLE AND NON DEGRADABLE WASTE BIN (Main Building)



## **DEGRADABLE AND NON DEGRADABLE WASTE BIN** (Main Building – First Floor)



## **DEGRADABLE AND NON DEGRADABLE WASTE BIN** (Building II – Ground Floor)



#### **CHEMICAL WASTE**



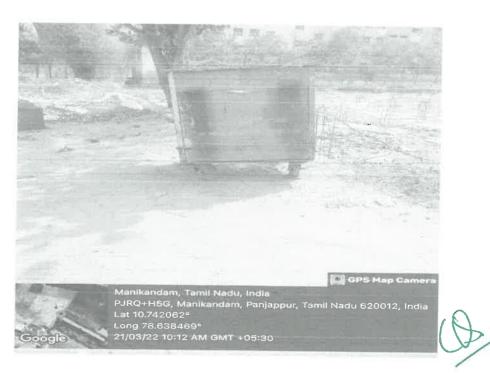
#### **E WASTE**



## NAPKIN DISPOSAL MACHINE



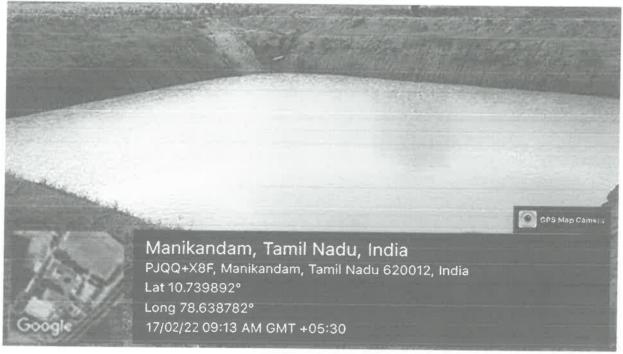
## SEGREGATION OF WASTE



## 7.1.2: The Institution has facilities and initiatives for

## 3. WATER CONSERVATION

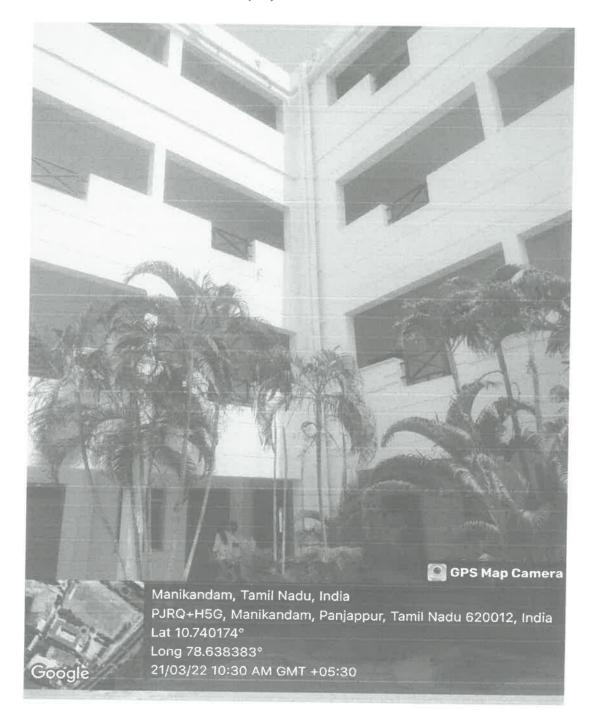
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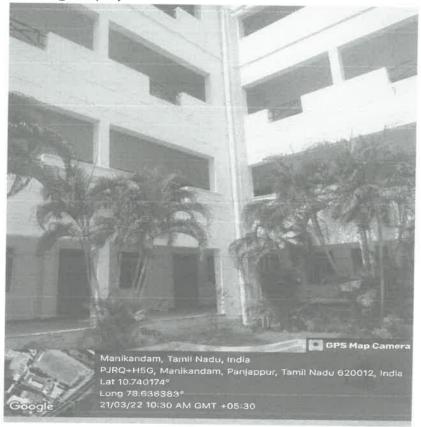
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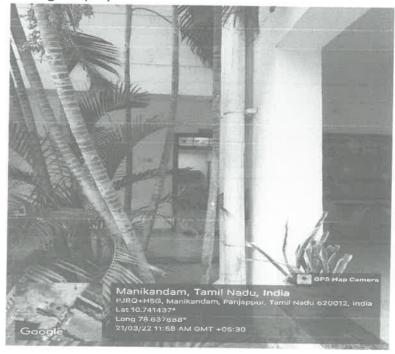
# **RAIN WATER HARVESTING PIT (1/4)**



# Rain Water Harvesting Pit (2/4)



## Rain Water Harvesting Pit (3/4)

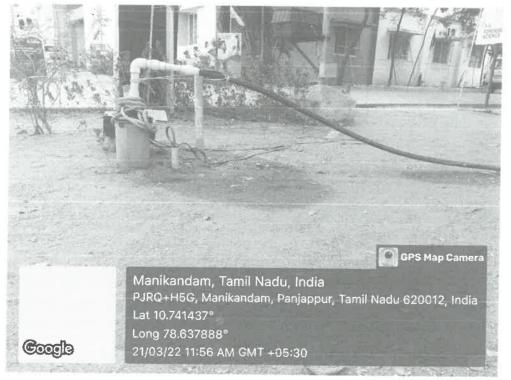


Dr. G. Balakrishnan, M.E., Ph.D., Principal Indra Ganesan College of Engineering IG Valley, Madurai Main Road Mapile referso Trick (2010)

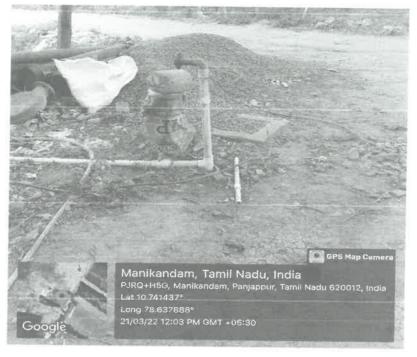
#### Rain Water Harvesting Pit (4/4)



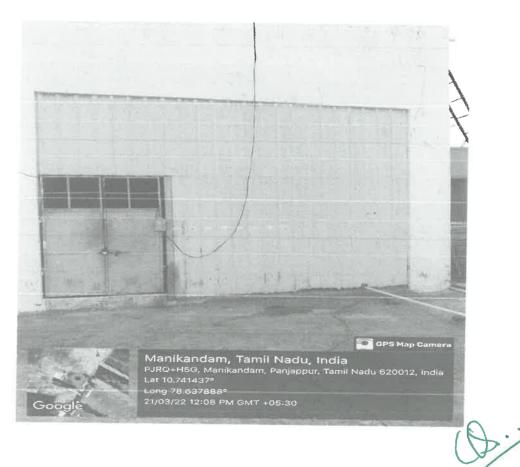
#### **BORE WELL 1**



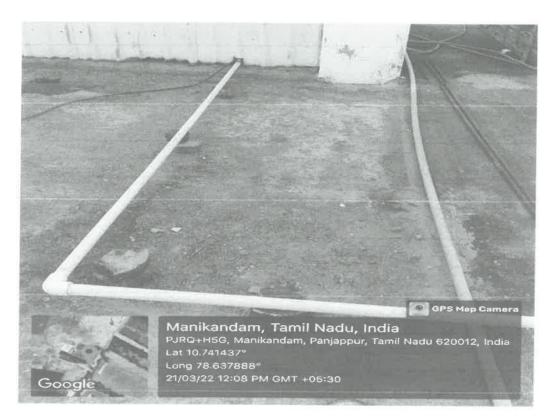
#### **BORE WELL 2**



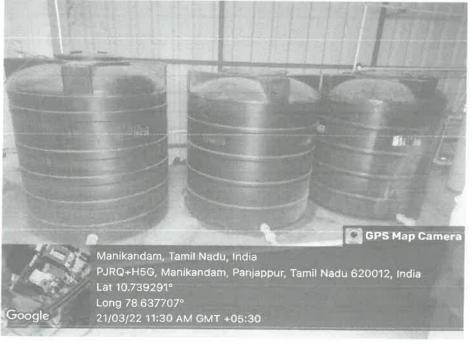
# WATER TANK - (MAIN BUILDING)



## WATER DISTRIBUTION THROUGH PIPE LINES

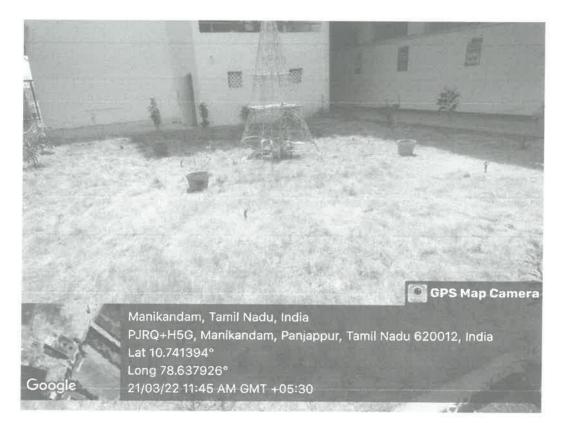


**REVERSE OSMOSIS PLANT (RO PLANT)** 



Dr. G. Balakrishnan, M.E., Ph.D., Principal Indra Ganesan College of Engineering IG Valley, Madurai Main Road Manikandam, Trichy-620 012.

## Waste Water Recycling - Drip Irrigation System



Dr. G. Balakrishnan, M.E., Ph.D., Principal Indra Ganesan College of Engineering IG Valley, Madurai Main Road Manikandam, Trichy-620 012.

# 7.1.2: The Institution has facilities and initiatives for

## 4. GREEN CAMPUS INITIATIVES

#### LIST OF TREES AND SAPLINGS IN COLLEGE CAMPUS

S.NO	Trees/ Saplings Tamil Name	Trees/Saplings English Name	Botanical NAME	COUNT	
				Trees	Sapling
1	Veppa Maram	Neem Tree	Azadirachta Indica	24	08
2	Naaval Maram	Java Plum or Indian Blackberry	Syzygium cumini	34	05
3	Nochi Maram	Peacock chaste tree	Vitex negundo	09	02
4	Netling Maram	Foxtail Palm	Wodyetia Bifurcata	97	12
5	Vaagai Maram	Syrrogate tree	Albizia Lebbeck	50	15
6	Thennai Maram	Coconut Tree	Cocos Nucifera	80	13
7	Kumizh Thekku	Beechwood	Gmelina Arborea	53	11
8	Pungai Maram	Pongamia Tree	Milletia Pinnata	52	13
9	Badam Maram	Almond Tree	Prunus dulcis	35	06
10	Malai Vemu Maram	Melia dubia	Melila Composite Wild	8	02
11	Murungai Maram	Drumstick tree	Moringa Oleiferea	7	04
12	Maa Maram	Mango Tree	Mangifera Indica	8	03
13	Konnai Maram	Indian laburnum tree	Cassia Fisla	13	07
14	Nelli Maram	Gooseberry Tree	Phyllanthus Emblica	1	05
15	Thekku Maram	Teak Tree	Tectona Grandis	150	45
16	Koyya Maram	Guava tree	Psidium Guajava	8	04
17	Pazha Maram	Jack tree	Artocarpus Heterophyllus	2	-
18	Sapota Maram	Sapota Tree	Manilkara Zapota	6	01
19	Moongil Maram	Bamboo tree	Bambusa vulgaris	19	09
20	Unknown			58	21
TOTAL				719	198

## **TREE PLANTATION PROGRAM ON 2021-2022**





#### **GO GREEN POSTER**



#### **VEHICLE ENTRY RESTRICTED**



Principal Indra Ganesan College of Engineering IG Valley, Madurai Main Road Manikandam, Trichy-620 012.

## SAY NO TO PLASTIC POSTER ON NOTICE BOARD



# WATER CONSERVATION POSTER



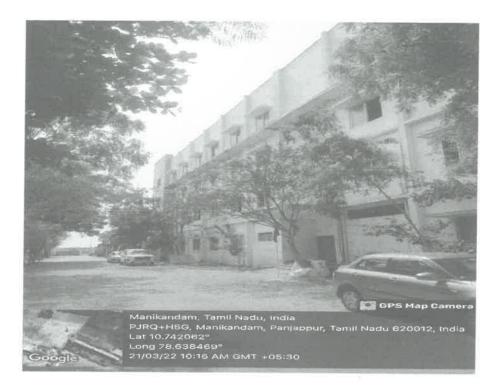
12:-

#### **BARRIER FREE ENVIRONMENT POSTER**

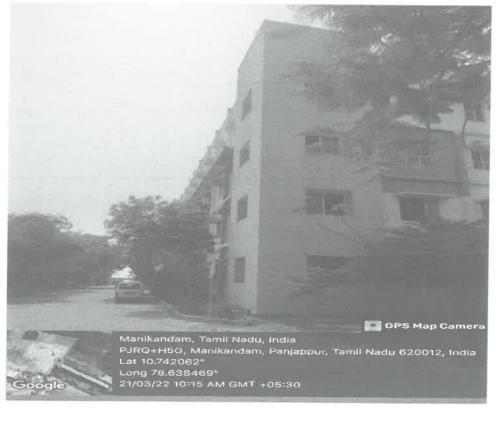


**COLLEGE CAMPUS PHOTOS (Main Building with Garden)** 





## BLOCK - II



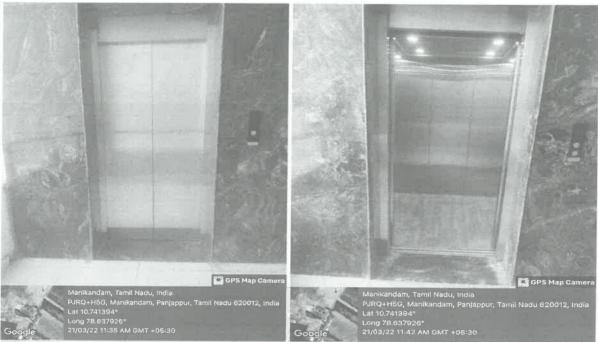
Dr. G. Balakrishnan, M.E., Ph.D., Principal

Indra Ganesan College of Engineering IG Valley, Madurai Main Road Manikandam, Trichy-620 012.

## 7.1.2: The Institution has facilities and initiatives for

# 5. DISABLED FRIENDLY, BARRIER FREE ENVIRONMENT





#### **RAMP FACILITIES**



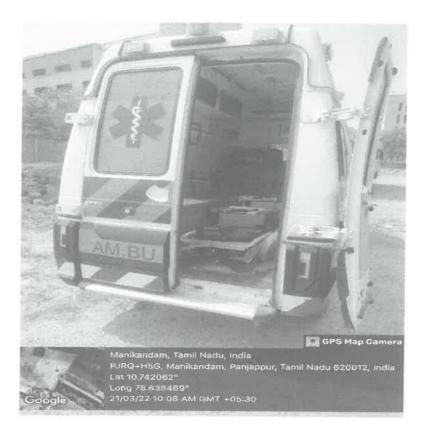
#### WHEEL CHAIR



#### **AMBULANCE FACILITIES**



•



FIRE EXTIGUISHERS AND FIRE BUCKETS FIRE EXTIGUISHER (Main Building - Ground Floor)



· d

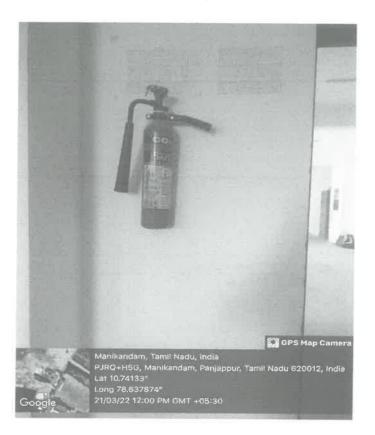
# FIRE EXTINGUISHERS - Main Building - First Floor



FIRE EXTINGUISHERS - Engineering Building - First Floor



# FIRE EXTINGUISHERS - Engineering Building - Second Floor

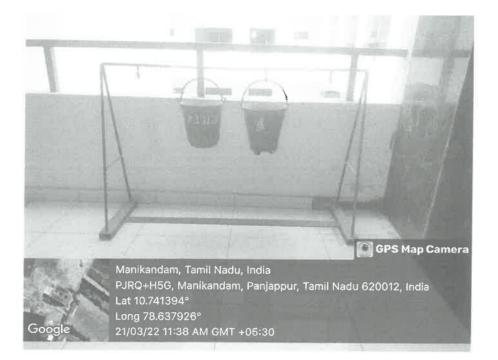


FIRE BUCKETS - MAIN BUILDING 1 (First Floor)



Manikandam, Trichy-620 012,

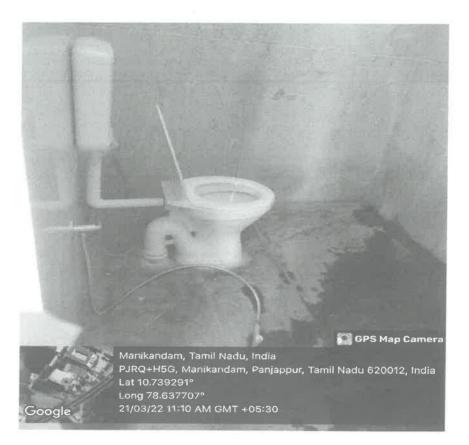
# FIRE BUCKETS - MAIN BUILDING 1 (Second Floor)



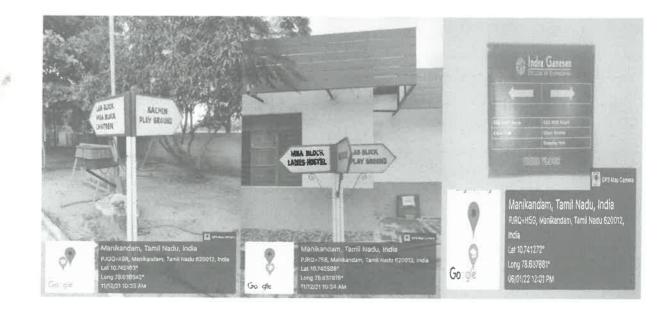
#### **DISABLED FRIENDLY WASHROOM (Gens)**



# **DISABLED FRIENDLY WASHROOM (Ladies)**



# SIGNAGE INCLUDING TACTILE PATH



Q.



# 7.1.2: The Institution has facilities and initiatives for

# 1. ALTERNATIVE SOURCES OF ENERGY AND ENERGY CONSERVATION MEASURES

### SOLAR PANEL - 20 kW

Solar panels are a renewable energy sources that have been installed on our college campus to reduce carbon footprint and save energy costs. Solar panels can also help colleges achieve their sustainability goals and demonstrate their commitment to environmental stewardship.



# Technical Specification for Panel : MODEL NO :KS72P320, Kirloskar Solar

- 1. Maximum Power = 320 Watts
- 2. Maximum Power voltage (vmp) = 36.58 v
- 3. Maximum Power current(Imp) = 8.76 A
- 4. Open circuit voltage 45.92V
- 5. Short circuit current (ISC) = 9.12A
- 6. Safety class = II
- 7. Application class = A

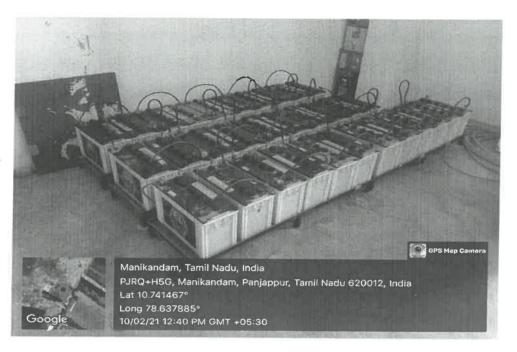
#### Technical Specification for Inverter, MID 20k ktl3-x, GROWATT INVERTER

- 1. Maximum PV Voltage = 1100 DC v
- 2. PV Voltage Range = 160-1000 DC v
- 3. PV Isc = 33.8 DC
- 4. Max. Input current =27 DC
- 5. Max output power = 20,000 W
- 6. Nominal output voltage = 230/400v AC v
- 7. Max Output current = 31.9 AC a
- 8. Nominal Output frequency = 50 / 60 hz.

Dr. G. Balakrishnan, M.E., Ph.D., Principal Indra Ganesan College of Engineering IG Valley, Madurai Main Road Manikandam, Trichy-620 012.

1

# **UNITTERUPTED POWER SUPPLY (20 KVA)**



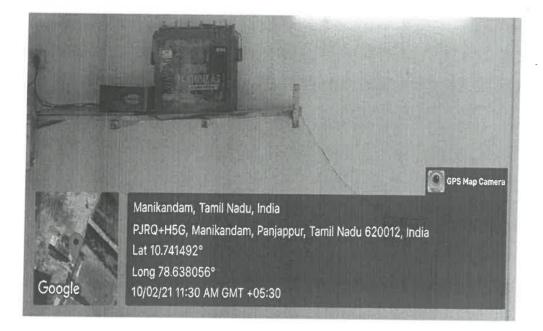
# MAIN BUILDING - (COMPUITER LAB.1)

UPS systems provide continuous power backup during outages, ensuring critical operations like classroom technology, research equipment, and systems remain uninterrupted.

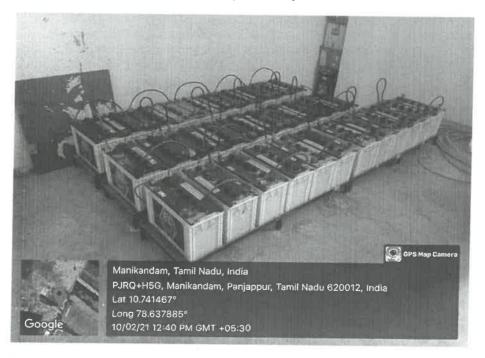


Dr. G. Balakrishnan, M.E., Ph.D., Principal Indra Ganesan College of Engineering IG Valley, Madurai Main Road Manikandam, Trichy-620 012.

# MAIN BUILDING - (OFFICE - 2 KVA)



# **UNITTERUPTED POWER SUPPLY – (30 KVA)**

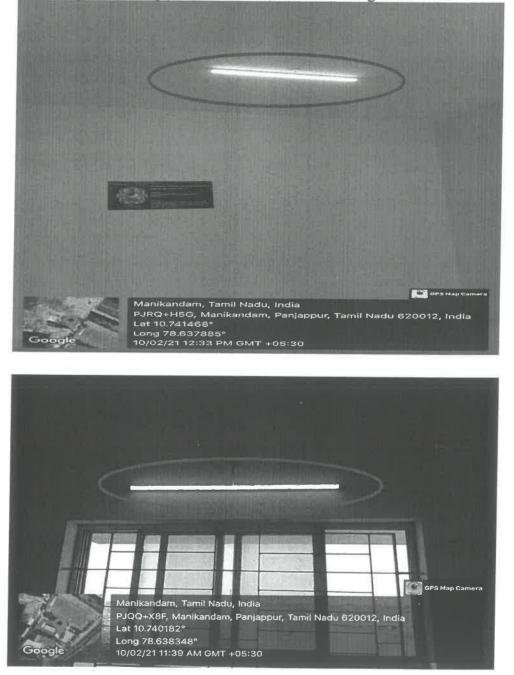


Dr. G. Balakrishnan, M.E., Ph.D.,

Principal Indra Ganesan College of Engineering IG Valley, Madurai Main Road Manikandam, Trichy-620 012.

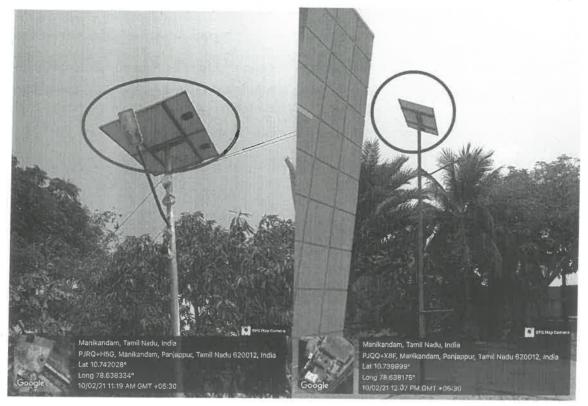
# **ENERGY CONSERVATION – LED LAMPS**

In our main college LED lamps are used and some of the images are shown below.



Dr. G. Balakrishnan, M.E., Ph.D.,

Principal Indra Ganesan College of Engineering IG Valley, Madurai Main Road Manikandam, Trichy-620 012. **ENERGY CONSERVATION – SOLAR BASED STREET LIGHT IN THE CAMPUS** 



#### **ENERGY CONSERVATION – E-VEHICLE**

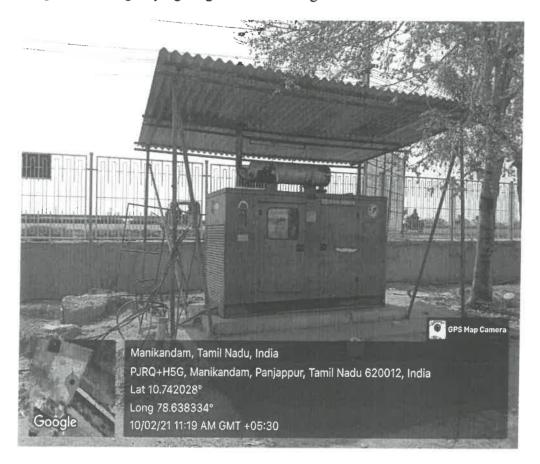
Battery Vehicles has reduced carbon foot print, improved air quality on college campus and cost savings.



5

# **DIESEL GENERATOR (125 KVA)**

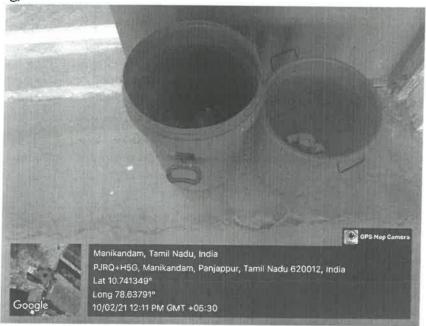
Diesel generators are used in our college campus to provide the continuity of options during the power outages and emergency lighting in case of emergencies.



# 7.1.2: The Institution has facilities and initiatives for

# 2. MANAGEMENT OF THE VARIOUS TYPES OF DEGRADABLE AND NON DEGRADABLE WASTE

Degradable and Non Degradable Waste Bin (Main Building)



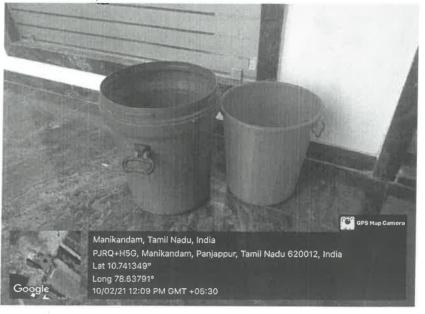
# DEGRADABLE AND NON DEGRADABLE WASTE BIN (Main Building – First Floor)



Dr. G. Balakrishnan, M.E., Ph.D., Principal Indra Ganesan College of Engineering IG Valley, Madurai Main Road Manikandam, Trichy-620 012.

7

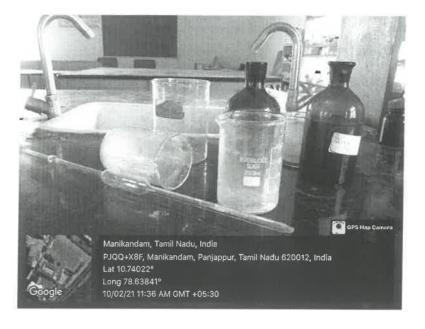
# DEGRADABLE AND NON DEGRADABLE WASTE BIN (Building II – Ground Floor)



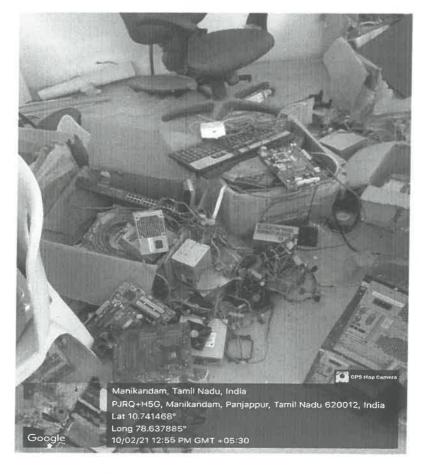
# DEGRADABLE AND NON DEGRADABLE WASTE BIN (Building II – Second Floor)



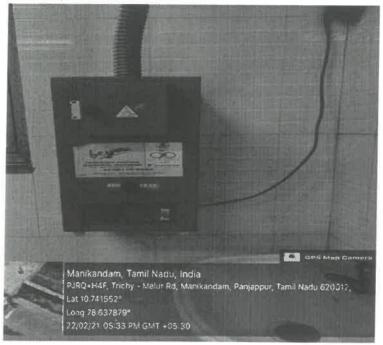
### **CHEMICAL WASTE**



**E WASTE** 



# NAPKIN DISPOSAL MACHINE



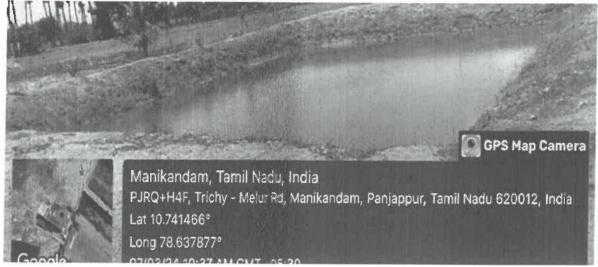
# SEGREGATION OF WASTE



#### 7.1.2: The Institution has facilities and initiatives for

# 3. WATER CONSERVATION

#### **RAIN WATER HARVESTING POND**



#### **RAIN WATER HARVESTING PLAN AND STRUCTURE**

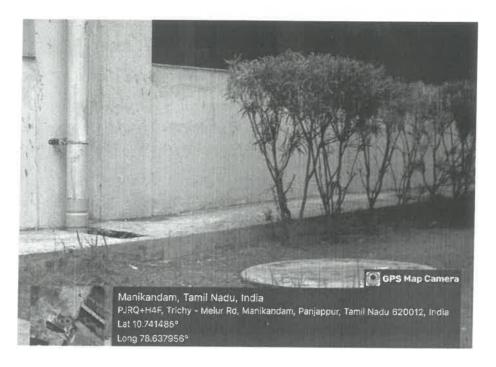
The Institution emphasizes the importance of water conservation among students and staffs. Various measures are being taken to preserve and conserve it. The huge volume of rainwater from the rooftop is collected in rain water harvesting pits that are constructed in the campus. This water stored in the pits percolates down to the ground which helps in ground water level improvement. The institute ensures that the water wastage is minimized at an optimal level and the leaky taps and pipes are under regular check and hence no loss of water is observed, neither by any leakages nor by overflow from overhead tanks. Rain water harvesting provides an independent water supply during regional restrictions the water thus collected is then used for several purposes the institution adopts sprinkler procedure in large lawns and water is very judiciously used for plantation purposes, in the extreme summer season, when water is scarce the rain water thus collected and stored in the underground tank is then used for the maintenance of the green cover in the campus.

#### **RAIN WATER HARVESTING PIT (1/4)**

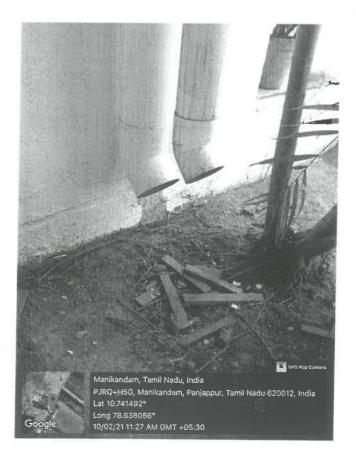
Rainwater harvesting pits are an essential component of RWH systems minimize storm water runoff, and contribute to environmental sustainability. In college campus rain water harvesting pit are provided around the building.

Dr. G. Balakrishnan, M.E., Ph.D., Principal Indra Ganesan College of Engineering IG Valley, Madurai Main Road Manikandam, Trichy-620 012.

11

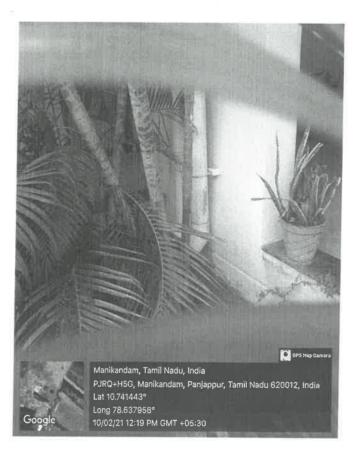


# Rain Water Harvesting Pit (2/4)

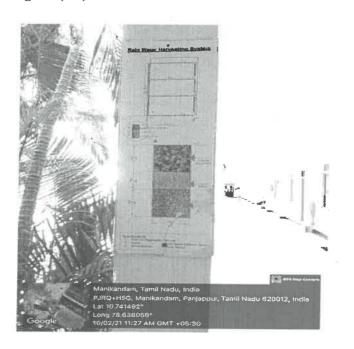


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# Rain Water Harvesting Pit (3/4)



Rain Water Harvesting Pit (4/4)

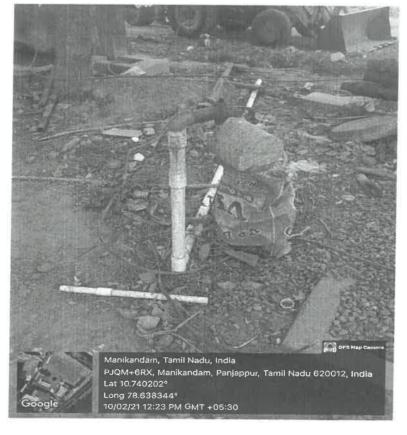


13

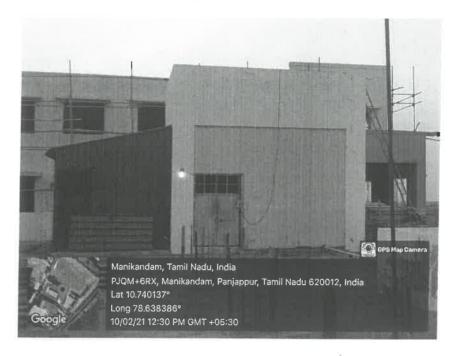
#### **BORE WELL 1**



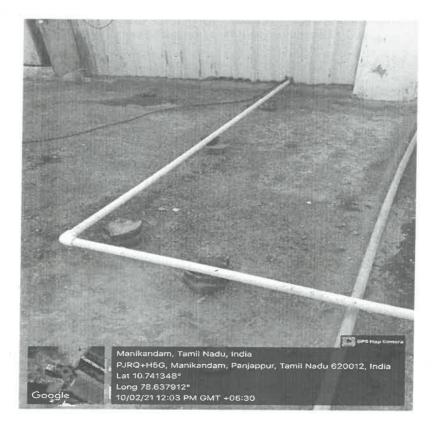
**BORE WELL 2** 



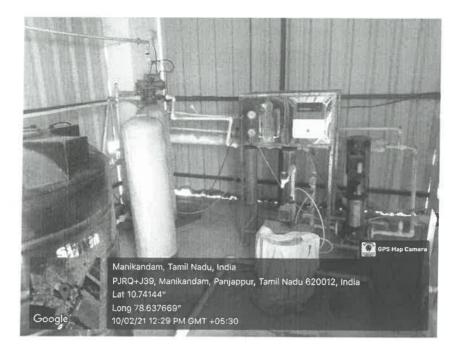
# WATER TANK - (MAIN BUILDING)



# WATER DISTRIBUTION THROUGH PIPE LINES



# REVERSE OSMOSIS PLANT (RO PLANT)



# Waste Water Recycling - Drip Irrigation System



16

# 7.1.2: The Institution has facilities and initiatives for

# 4. GREEN CAMPUS INITIATIVES

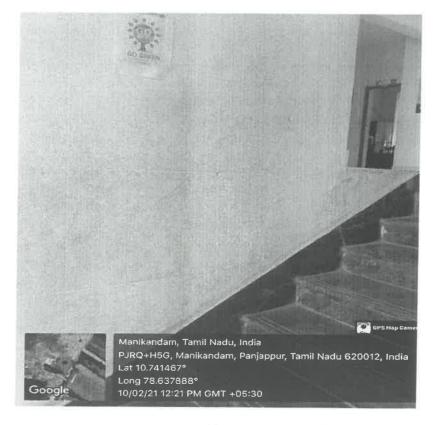
S.NO	Trees/ Saplings Tamil Name	Trees/Saplings English Name	Botanical NAME	COUNT	
				Trees	Sapling
1	Veppa Maram	Neem Tree	Azadirachta Indica	26	08
2	Naaval Maram	Java Plum or Indian Blackberry	Syzygium cumini	38	05
3	Nochi Maram	Peacock chaste tree	Vitex negundo	İ1	02
4	Netling Maram	Foxtail Palm	Wodyetia Bifurcata	97	08
5	Vaagai Maram	Syrrogate tree	Albizia Lebbeck	50	07
6	Thennai Maram	Coconut Tree	Cocos Nucifera	88	19
7	Kumizh Thekku	Beechwood	Gmelina Arborea	63	06
8	Pungai Maram	Pongamia Tree	Milletia Pinnata	62	08
9	Badam Maram	Almond Tree	Prunus dulcis	38	06
10	Malai Vemu Maram	Melia dubia	Melila Composite Wild	8	02
11	Murungai Maram	Drumstick tree	Moringa Oleiferea	7	09
12	Maa Maram	Mango Tree	Mangifera Indica	8	03
13	Konnai Maram	Indian laburnum tree	Cassia Fisla	18	07
14	Nelli Maram	Gooseberry Tree	Phyllanthus Emblica	1	05
15	Thekku Maram	Teak Tree	Tectona Grandis	80	05
16	Koyya Maram	Guava tree	Psidium Guajava	8	04
17	Pazha Maram	Jack tree	Artocarpus Heterophyllus	2	
18	Sapota Maram	Sapota Tree	Manilkara Zapota	6	01
	Moongil Maram		Bambusa vulgaris	19	06
20	Unknown			48	21
TOTAL				684	158

# LIST OF TREES AND SAPLINGS IN COLLEGE CAMPUS

# **TREE PLANTATION PROGRAM ON 2020- 2021**

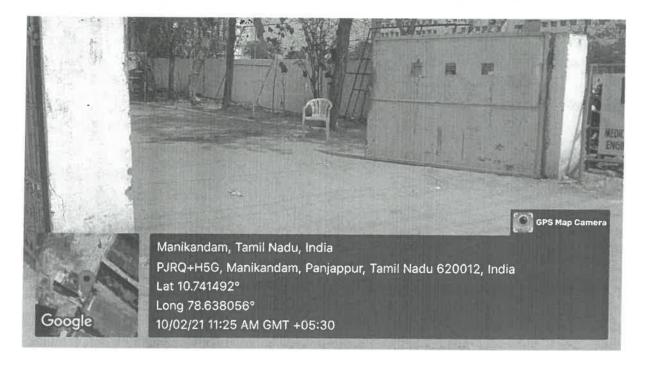


# **GO GREEN POSTER**



18

# **VEHICLE ENTRY RESTRICTED**



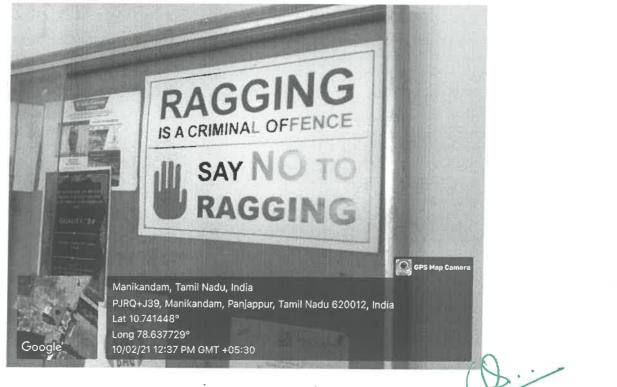
# SAY NO TO PLASTIC POSTER ON NOTICE BOARD



# WATER CONSERVATION POSTER

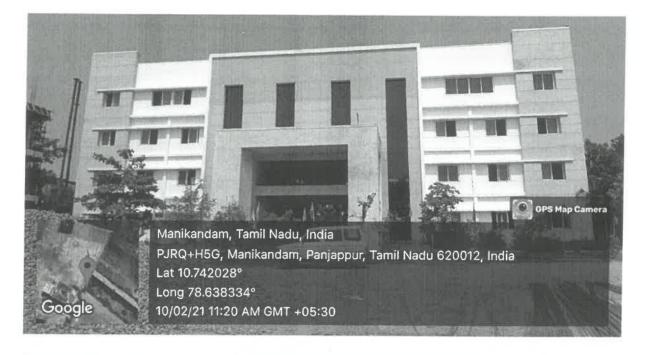


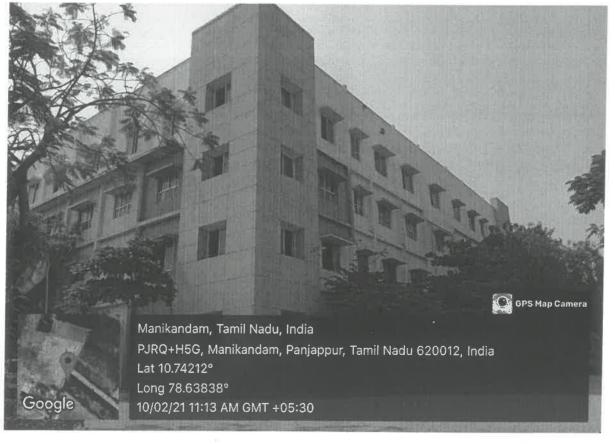
#### **BARRIER FREE ENVIRONMENT POSTER**



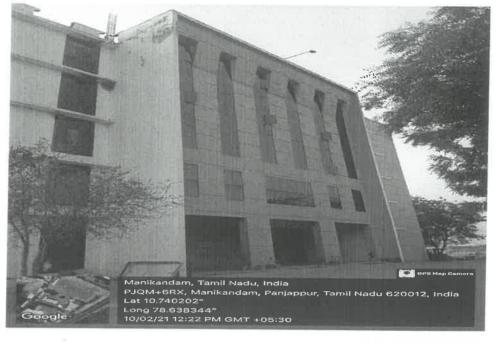
20

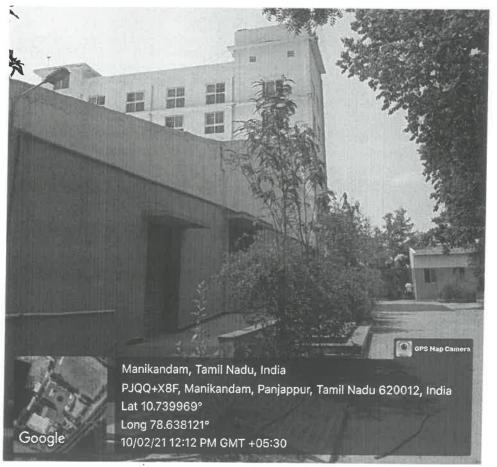
# **COLLEGE CAMPUS PHOTOS (Main Building with Garden)**





# BLOCK - II





N.

22

# 7.1.2: The Institution has facilities and initiatives for

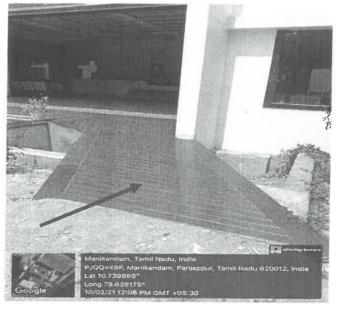
# 5. DISABLED FRIENDLY, BARRIER FREE ENVIRONMENT

# LIFT



### **Ramp Facilities**

Main building has a ramp designed for individuals with disabilities, particularly those with mobility impairments.

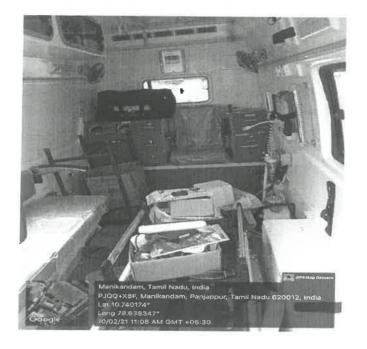


# WHEEL CHAIR



**AMBULANCE FACILITIES** 

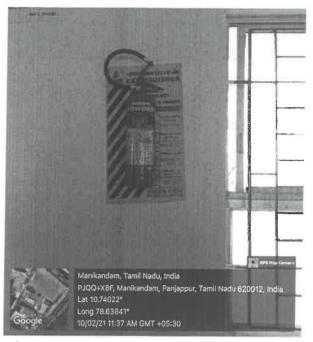




FIRE EXTIGUISHERS AND FIRE BUCKETS FIRE EXTIGUISHER (Main Building - Ground Floor)



# FIRE EXTINGUISHERS - Main Building - First Floor



FIRE EXTINGUISHERS - Engineering Building - First Floor

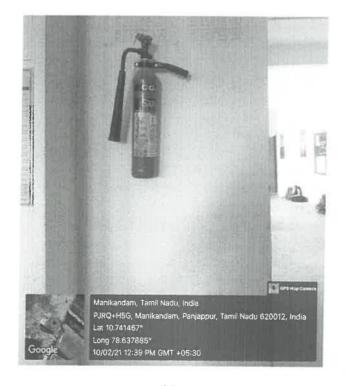


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# FIRE EXTINGUISHERS - Engineering Building - Second Floor



# FIRE EXTINGUISHERS - Engineering Building – Third Floor

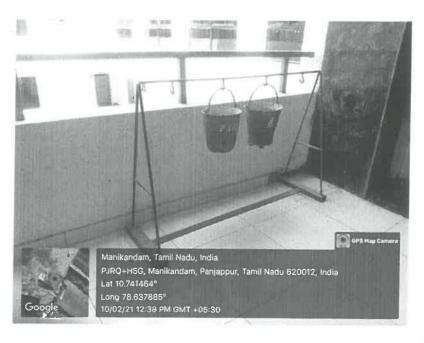


Dr. G. Balakrishnan, M.E., Ph.D., Principal Indra Ganesan College of Engineering IG Valley, Madurai Main Road Manikandam, Trichy-620 012.

# <complex-block>

# FIRE BUCKETS - MAIN BUILDING 1 (First Floor)

FIRE BUCKETS - MAIN BUILDING 1 (Second Floor)



# **DISABLED FRIENDLY WASHROOM (Gens)**



# **DISABLED FRIENDLY WASHROOM (Ladies)**



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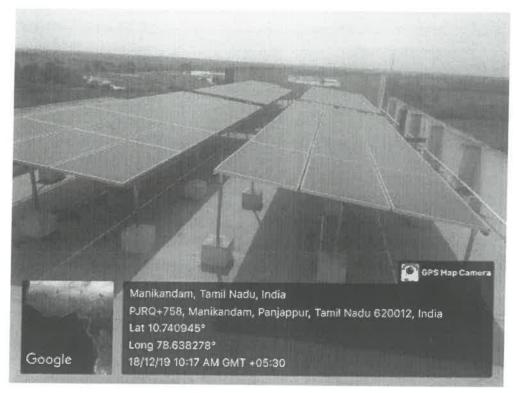


# 7.1.2: The Institution has facilities and initiatives for

# 1. ALTERNATIVE SOURCES OF ENERGY AND ENERGY CONSERVATION MEASURES

# **SOLAR PANEL - 100 KW**

Solar panels are a renewable energy sources that have been installed on our college campus to reduce carbon footprint and save energy costs. Solar panels can also help colleges achieve their sustainability goals and demonstrate their commitment to environmental stewardship.



# Technical Specification for Panel : MODEL NO :KS72P320, Kirloskar Solar

- 1. Maximum Power = 320Watts
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- 3. Maximum Power current(Imp) = 8.76 A
- 4. Open circuit voltage 45.92V
- 5. Short circuit current (ISC) = 9.12A
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- 7. Application class = A

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- 7. Max Output current = 31.9 AC a
- 8. Nominal Output frequency = 50 / 60 hz.

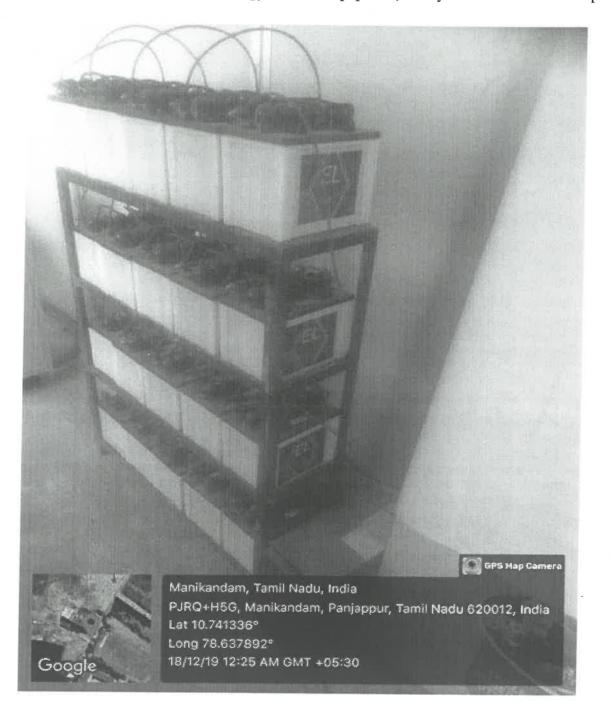
#### **UNITTERUPTED POWER SUPPLY (20 KVA)**



Dr. G. Balakrishnan, M.E., Ph.D., Principal Indra Ganesan College of Engineering IG Valley, Madurai Main Road Manikandam, Trichy-620 012.

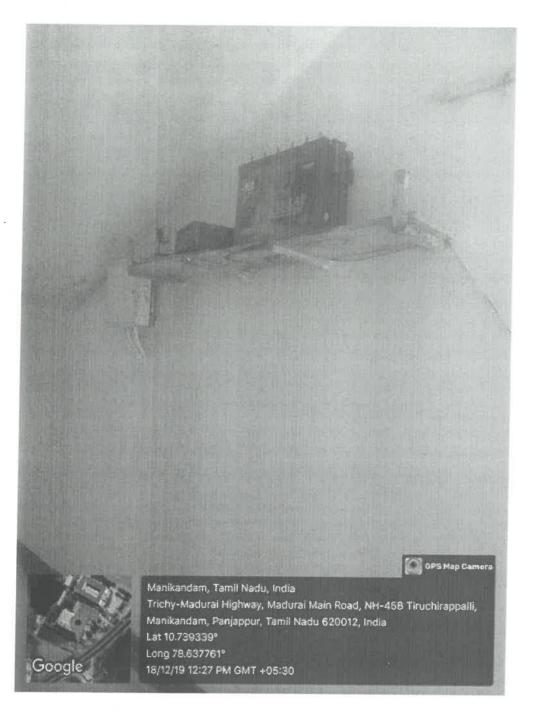
#### MAIN BUILDING - COMPUITER LAB.1

UPS systems provide continuous power backup during outages, ensuring critical operations like classroom technology, research equipment, and systems remain uninterrupted.



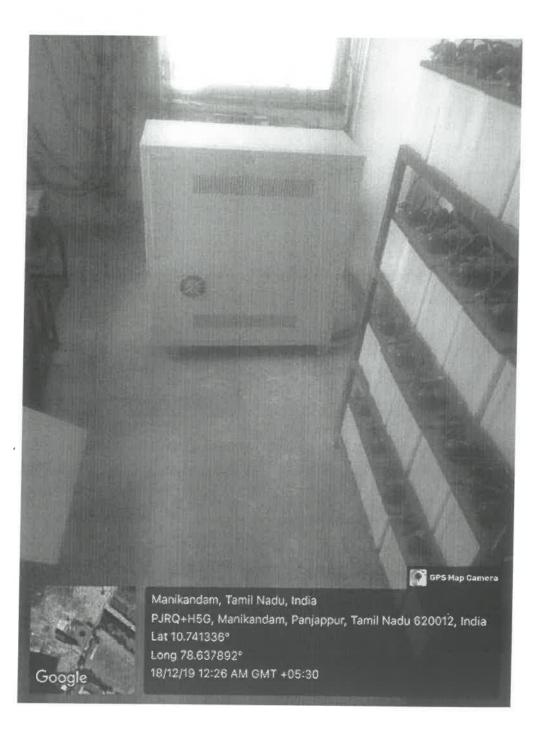
Dr. G. Balakrishnan, M.E., Ph.D., Principal Indra Ganesan College of Engineering IG Valley, Madural Main Road Manikandam, Trichy-620 012.

## MAIN BUILDING - OFFICE - 2 KVA



D:

## **UNITTERUPTED POWER SUPPLY – 30 KVA**



Dr. G. Balakrishnan, M.E., Ph.D., Principal Indra Ganesan College of Engineering IG Valley, Madurai Main Road Manikandam, Trichy-620 012.

## **ENERGY CONSERVATION – LED LAMPS**

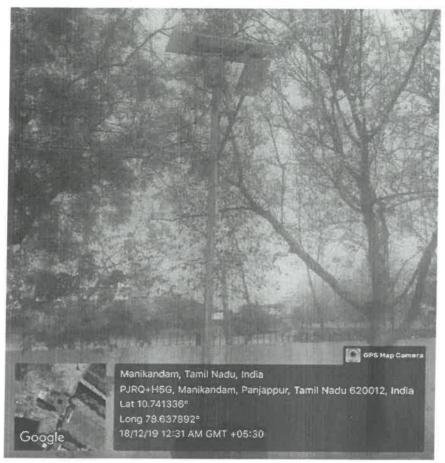
In our main college LED lamps are used and some of the images are shown below.



#### **ENERGY CONSERVATION - SOLAR BASED STREET LIGHT IN THE CAMPUS**



#### **ENERGY CONSERVATION - SOLAR BASED STREET LIGHT IN THE CAMPUS**



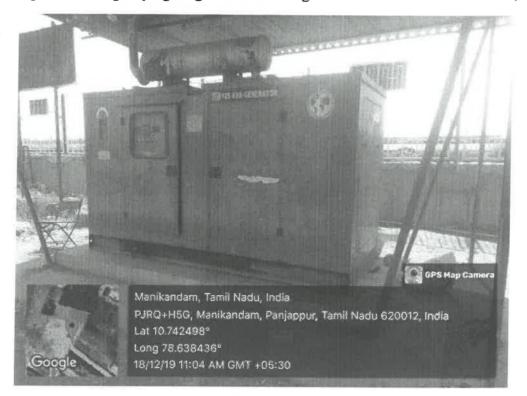
#### **ENERGY CONSERVATION – E-VEHICLE**

Battery Vehicles has reduced carbon foot print, improved air quality on college campus and cost savings.



### **DIESEL GENERATOR (125 KVA)**

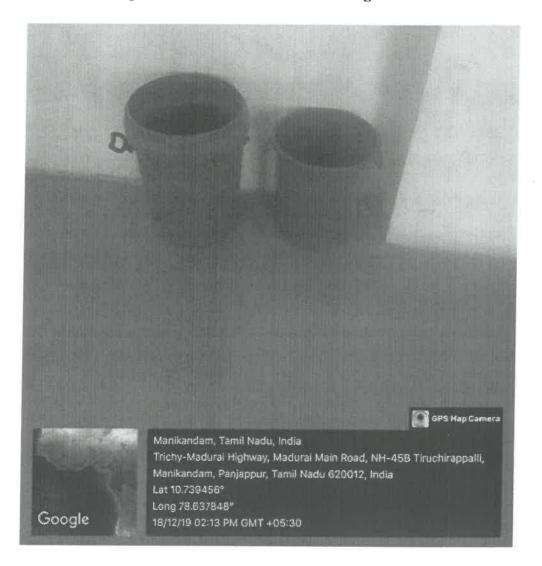
Diesel generators are used in our college campus to provide the continuity of options during the power outages and emergency lighting in case of emergencies.



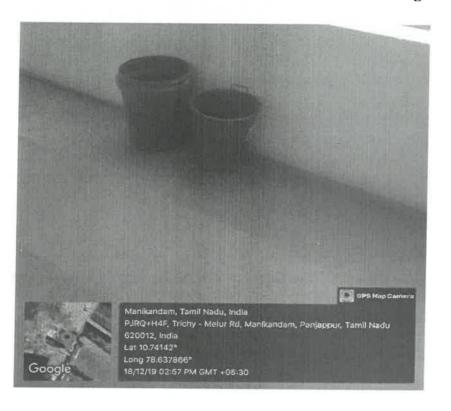
## 7.1.2: The Institution has facilities and initiatives for

## 1. MANAGEMENT OF THE VARIOUS TYPES OF DEGRADABLE AND NON DEGRADABLE WASTE

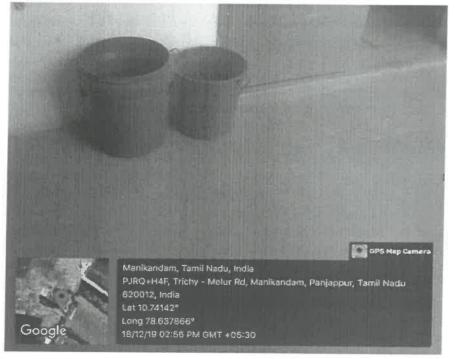
Degradable and Non Degradable Waste Bin - Main Building



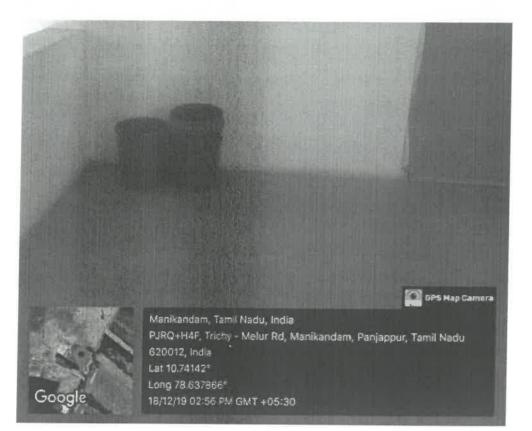
# DEGRADABLE AND NON DEGRADABLE WASTE BIN -Main Building – First Floor



## **DEGRADABLE AND NON DEGRADABLE WASTE BIN**



DEGRADABLE AND NON DEGRADABLE WASTE BIN - Building II - First Floor



**CHEMICAL WASTE** 



Dr. G. Balakrishnan, M.E., Ph.D., Principal Indra Ganesan College of Engineering IG Valley, Madurai Main Road



## **SEGREGATION OF WASTE**

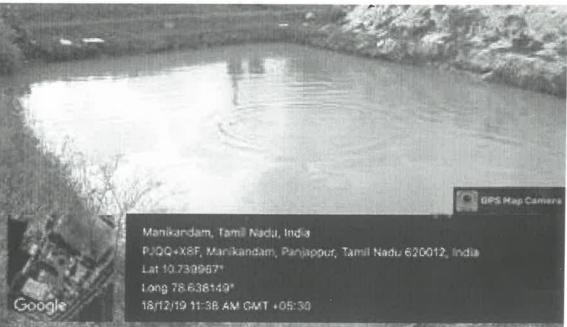


N:

#### 7.1.2: The Institution has facilities and initiatives for

#### 3. WATER CONSERVATION

#### **RAIN WATER HARVESTING POND**



#### **RAIN WATER HARVESTING PLAN AND STRUCTURE**

The Institution emphasizes the importance of water conservation among students and staffs. Various measures are being taken to preserve and conserve it. The huge volume of rainwater from the rooftop is collected in rain water harvesting pits that are constructed in the campus. This water stored in the pits percolates down to the ground which helps in ground water level improvement. The institute ensures that the water wastage is minimized at an optimal level and the leaky taps and pipes are under regular check and hence no loss of water is observed, neither by any leakages nor by overflow from overhead tanks. Rain water harvesting provides an independent water supply during regional restrictions the water thus collected is then used for several purposes the institution adopts sprinkler procedure in large lawns and water is very judiciously used for plantation purposes, in the extreme summer season, when water is scarce the rain water thus collected and stored in the underground tank is then used for the maintenance of the green cover in the campus



#### **RAIN WATER HARVESTING PIT**

Rainwater harvesting pits are an essential component of RWH systems minimize storm water runoff, and contribute to environmental sustainability. In college campus rain water harvesting pit are provided around the building.

Rain Water Harvesting Pit (1/3)



#### Rain Water Harvesting Pit (2/3)



Rain Water Harvesting Pit (3/3)



#### BORE WELL 1



#### WATER TANK



\$

#### WATER DISTRIBUTION THROUGH PIPE LINES

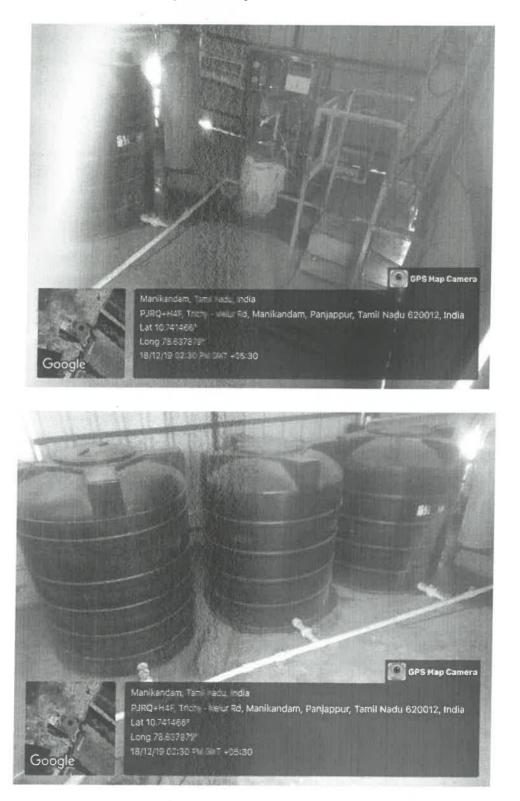


## Waste Water Recycling Plant



Dr. G. Balakrishnan, M.E., Ph.D., Principal Indra Ganesan College of Engineering IG Valley, Madurai Main Road Manikandam, Trichy-620 012.

#### **REVERSE OSMOSIS PLANT (RO PLANT)**



D.

Dr. G. Balakrishnan, M.E., Ph.D. Principal Indra Ganesan College of Engineering IG Valley, Madurai Main Road

#### Markandam, Tamil Nadu, India Nakandam, Tamil Nakandam, Panjapout, Tamil Nadu, Goudo, India

#### Waste Water Recycling - Drip Irrigation System

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# 7.1.2: The Institution has facilities and initiatives for

#### 1. ALTERNATIVE SOURCES OF ENERGY AND ENERGY CONSERVATION MEASURES

#### SOLAR PANEL - 100 KW

Solar panels are a renewable energy sources that have been installed on our college campus to reduce carbon footprint and save energy costs. Solar panels can also help colleges achieve their sustainability goals and demonstrate their commitment to environmental stewardship.



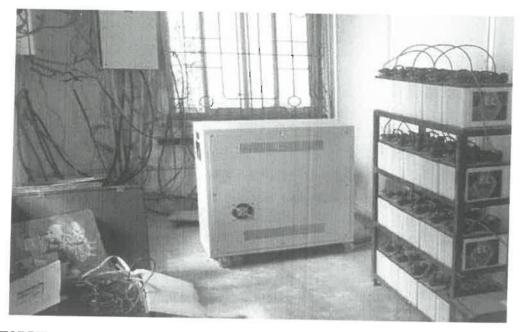
Technical Specification for Panel : MODEL NO :KS72P320, Kirloskar Solar

- 1. Maximum Power =320Watts
- 2. Maximum Power voltage (vmp) = 36.58 v
- 3. Maximum Power current(Imp) = 8.76 A
- 4. Open circuit voltage 45.92V
- 5. Short circuit current (ISC) = 9.12A
- 6. Safety class = II
- 7. Application class = A

#### Technical Specification for Inverter, MID 20k ktl3-x, GROWATT INVERTER

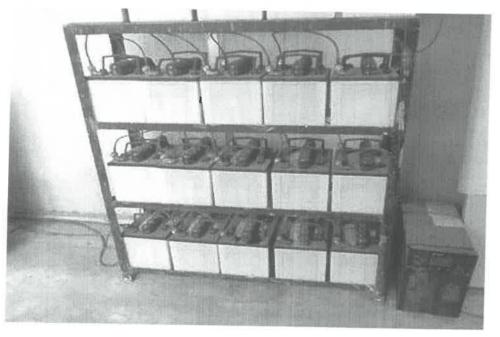
- 1. Maximum PV Voltage = 1100 DC v
- 2. PV Voltage Range = 160-1000 DC v
- 3. PV lsc = 33.8 DC
- 4. Max. Input current =27 DC
- 5. Max output power = 20,000W
- 6. Nominal output voltage = 230/400v AC v
- 7. Max Output current = 31.9 AC a
- 8. Nominal Output frequency = 50 / 60 hz.

# **UNITTERUPTED POWER SUPPLY (20 KVA)**



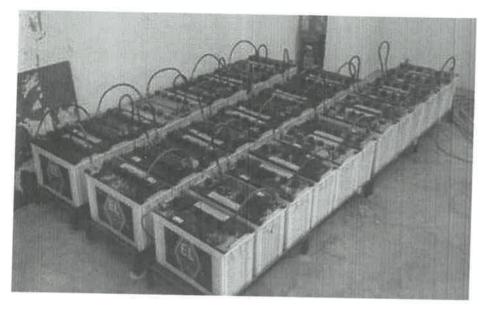
# (MAIN BUILDING - COMPUITER LAB.1)

UPS systems provide continuous power backup during outages, ensuring critical operations like classroom technology, research equipment, and systems remain uninterrupted.



Principal Indra Ganesan College of Engineering IG Valley, Madurai Main Road

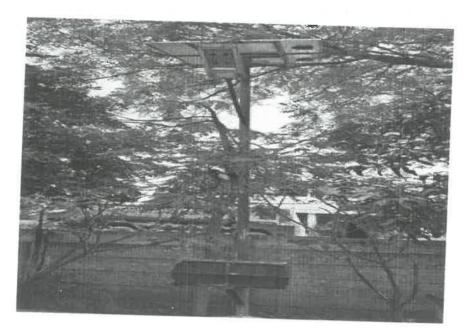
# **UNITTERUPTED POWER SUPPLY - 30 KVA**



# **ENERGY CONSERVATION – LED LAMPS**



# ENERGY CONSERVATION - SOLAR BASED STREET LIGHT IN THE CAMPUS



## DIESEL GENERATOR

Diesel generators are used in our college campus to provide the continuity of options during the power outages and emergency lighting in case of emergencies.

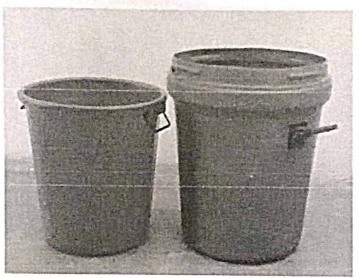


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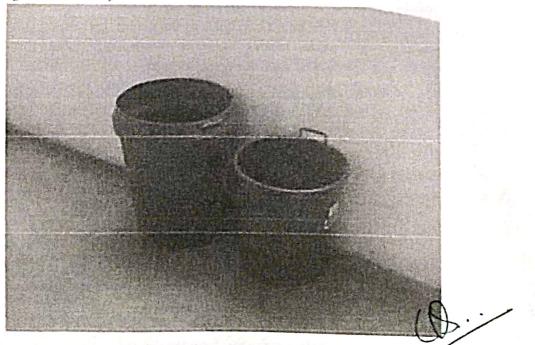
# 7.1.2: The Institution has facilities and initiatives for

# **2.** MANAGEMENT OF THE VARIOUS TYPES OF DEGRADABLE AND NON DEGRADABLE WASTE

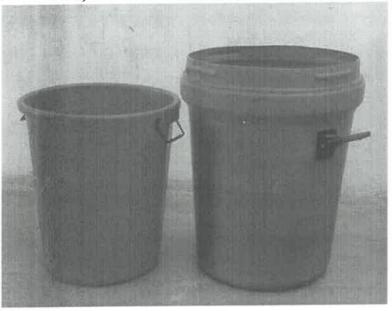
#### DEGRADABLE AND NON DEGRADABLE WASTE BIN (Main Building)



#### DEGRADABLE AND NON DEGRADABLE WASTE BIN (Main Building – First Floor)



#### DEGRADABLE AND NON DEGRADABLE WASTE BIN (Building II – Ground Floor)

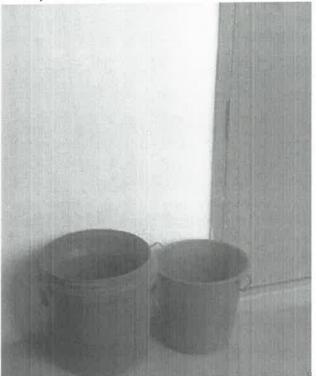


DEGRADABLE AND NON DEGRADABLE WASTE BIN (Building II – First Floor)



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## DEGRADABLE AND NON DEGRADABLE WASTE BIN (Building II – Second Floor)



CHEMICAL WASTE



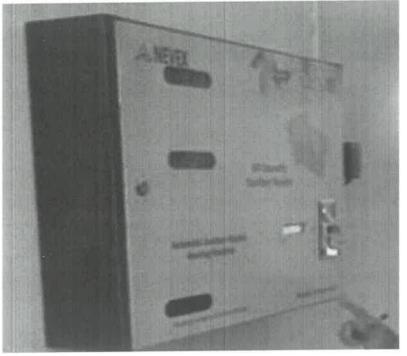
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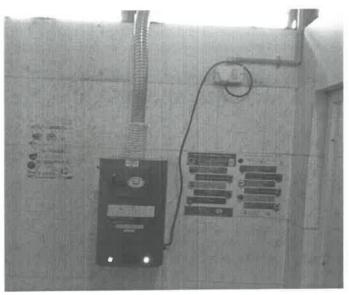
E WASTE



NAPKIN DISPOSAL MACHINE - I

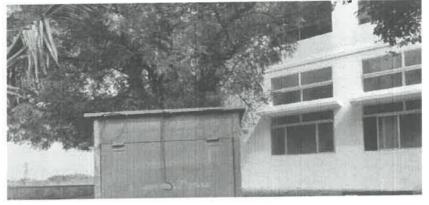


NAPKIN DISPOSAL MACHINE - II



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# SEGREGATION OF WASTE



(D)

#### 7.1.2: The Institution has facilities and initiatives for

#### 3. WATER CONSERVATION

#### **RAIN WATER HARVESTING POND**



#### RAIN WATER HARVESTING PLAN AND STRUCTURE

The Institution emphasizes the importance of water conservation among students and staffs. Various measures are being taken to preserve and conserve it. The huge volume of rainwater from the rooftop is collected in rain water harvesting pits that are constructed in the campus. This water stored in the pits percolates down to the ground which helps in ground water level improvement. The institute ensures that the water wastage is minimized at an optimal level and the leaky taps and pipes are under regular check and hence no loss of water is observed, neither by any leakages nor by overflow from overhead tanks. Rain water harvesting provides an independent water supply during regional restrictions the water thus collected is then used for several purposes the institution adopts sprinkler procedure in large lawns and water is very judiciously used for plantation purposes, in the extreme summer season, when water is scarce the rain water thus collected and stored in the underground tank is then used for the maintenance of the green cover in the campus.

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#### RAIN WATER HARVESTING PIT (1/5)

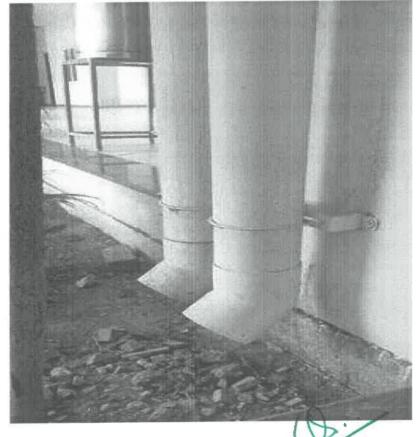
Rainwater harvesting pits are an essential component of RWH systems minimize storm water runoff, and contribute to environmental sustainability. In college campus rain water harvesting pit are provided around the building.



RAIN WATER HARVESTING PIT (2/5)



RAIN WATER HARVESTING PIT (3/5)



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#### **RAIN WATER HARVESTING PIT (4/5)**



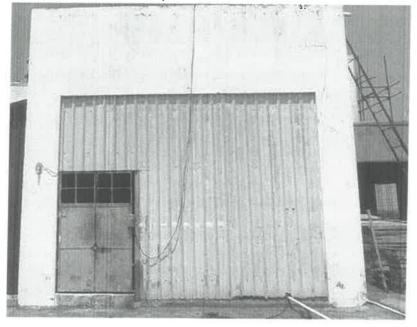
**BORE WELL** 



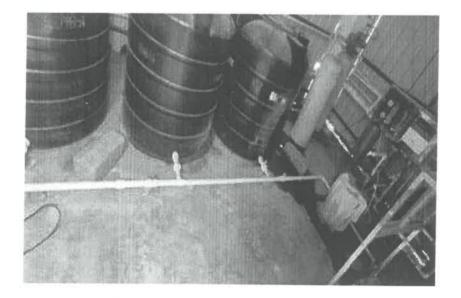
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WATER TANK - (MAIN BUILDING)



## WATER DISTRIBUTION THROUGH PIPE LINES

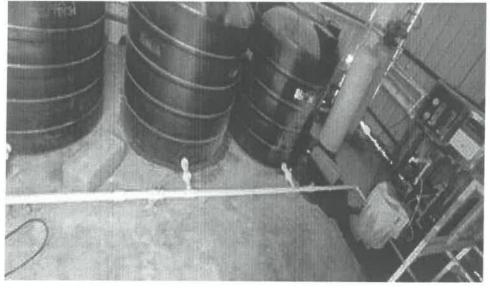


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#### WASTE WATER RECYCLING PLANT



#### **REVERSE OSMOSIS PLANT (RO PLANT)**



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WASTE WATER RECYCLING - DRIP IRRIGATION SYSTEM

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#### 7.1.2: The Institution has facilities and initiatives for

#### 4. GREEN CAMPUS INITIATIVES

S.NO	Trees/ Saplings Tamil Name	Trees/Saplings English Name	Botanical NAME	COUNT	
				Trees	Saplings
1	Veppa Maram	Neem Tree	Azadirachta Indica	26	01
2	Naaval Maram	Java Plum or Indian Blackberry	Syzygium cumini	38	05
3	Nochi Maram	Peacock chaste tree	Vitex negundo	11	02
4	Netling Maram	Foxtail Palm	Wodyetia Bifurcata	77	5
5	Vaagai Maram	Syrrogate tree	Albizia Lebbeck	50	7
6	Thennai Maram	Coconut Tree	Cocos Nucifera	50	8
7	Kumizh Thekku	Beechwood	Gmelina Arborea	53	11
8	Pungai Maram	Pongamia Tree	Milletia Pinnata	40	8
9	Badam Maram	Almond Tree	Prunus dulcis	38	06
10	Malai Vemu Maram	Melia dubia	Melila Composite Wild	8	02
11	Murungai Maram	Drumstick tree	Moringa Oleiferea	7	04
12	Maa Maram	Mango Tree	Mangifera Indica	8	03
13	Konnai Maram	Indian laburnum tree	Cassia Fisla	18	07
14	Nelli Maram	Gooseberry Tree	Phyllanthus Emblica	1	05
15	Thekku Maram	Teak Tree	Tectona Grandis	90	10
16	Koyya Maram	Guava tree	Psidium Guajava	8	04
17	Pazha Maram	Jack tree	Artocarpus Heterophyllus	2	-
18	Sapota Maram	Sapota Tree	Manilkara Zapota	6	01
19	Moongil Maram	Bamboo tree	Bambusa vulgaris	19	04
20	Unknown			50	3
-that		TOTAL		600	97

#### LIST OF TREES AND SAPLINGS IN COLLEGE CAMPUS

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# TREE PLANTATION PROGRAM ON 2018-2019

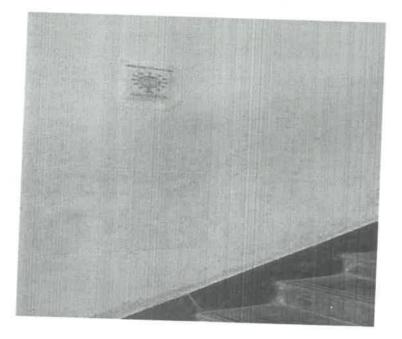




Dr. G. Balakrishnan, M.E., Ph.D., Principal

Indra Ganesan College of Engineering No Vallov, Macurai Main Road

### **GO GREEN POSTER**



## VEHICLE ENTRY RESTRICTED



3.

Dr. G. Balakrishnan, M.E., Ph.D., Principal Indra Ganesan College of Engineering IC Valley, Madurai Main Road

## SAY NO TO PLASTIC POSTER ON NOTICE BOARD



Dr. G. Balakrishnan, M.E., Ph.D., Principal Indra Ganesan College of Engineering IG Valley, Madurai Main Road Monikandah, Trichy-620 012.

## WATER CONSERVATION POSTER



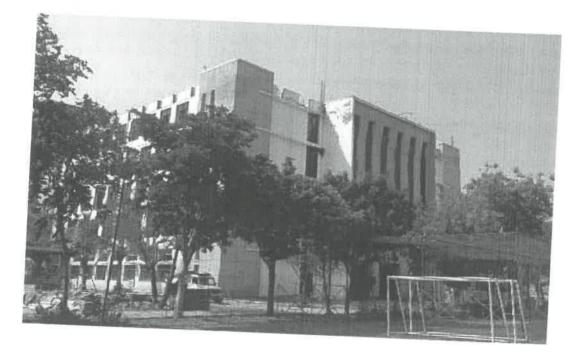
## **COLLEGE CAMPUS PHOTOS (Main Building with Garden)**



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### Block - II

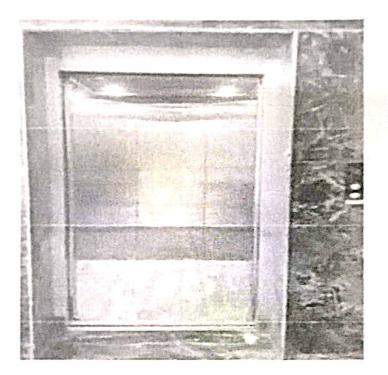


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#### 7.1.2: The Institution has facilities and initiatives for

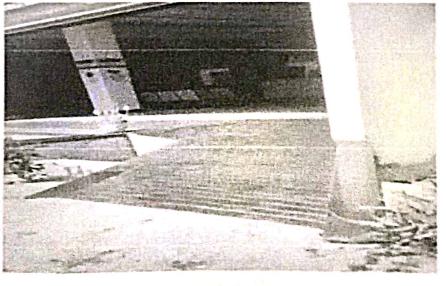
### 5. DISABLED FRIENDLY, BARRIER FREE ENVIRONMENT

#### LIFT

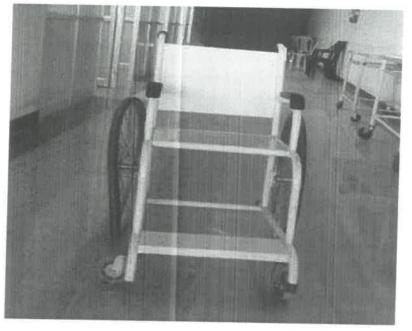


#### **Ramp Facilities**

Main building has a ramp designed for individuals with disabilities, particularly those with mobility impairments.



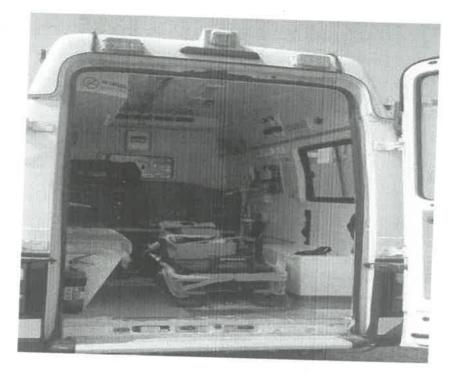
Dr. G. Balakrishnan, M.E., Ph.D., Principal Indra Ganesan College of Engineerin IG Valley, Madurai Main Road Manikandam, Trichy-620 02. WHEEL CHAIR



### AMBULANCE FACILITIES



Dr. G. Balakrishnan, M.E., Ph.D., Principal Indra Ganesan College of Engineering Main Road =1 n<u>12</u>



FIRE EXTIGUISHERS AND FIRE BUCKETS FIRE EXTIGUISHER (Main Building - Ground Floor)



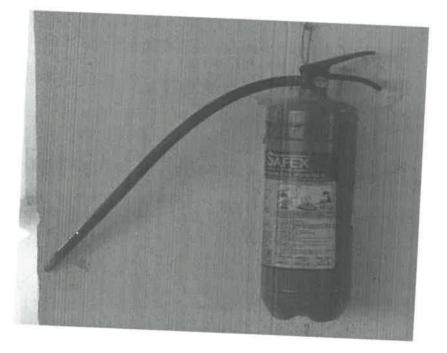
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Dr. G. Balakrishnan, M.E., Ph.D., Principal Indra Ganesan College of Engineering Madurai Main Road

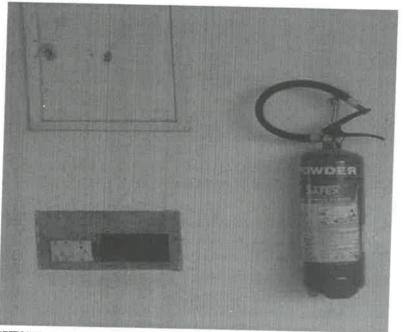
# FIRE EXTINGUISHERS - Main Building - First Floor



FIRE EXTINGUISHERS - Engineering Building - First Floor



Dr. G. Balakrishnan, M.E., Ph.D., Principal Indra Ganesan College of Engineering



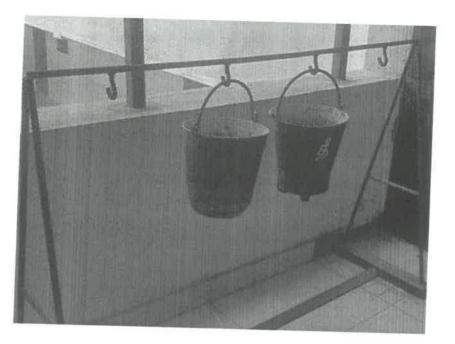
FIRE EXTINGUISHERS - Engineering Building – Second Floor

FIRE EXTINGUISHERS - Engineering Building – Third Floor

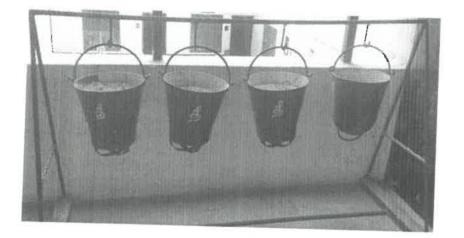


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## FIRE BUCKETS - MAIN BUILDING 1 (First Floor)



FIRE BUCKETS - MAIN BUILDING 1 (Second Floor)



Dr. G. Balakrishnan, M.E., Ph.D., Principal Indra Ganesan College of Engineering IG Valley, Madurai Main Road

- 1,close 520 012.

# DISABLED FRIENDLY WASHROOM (Gens)



# DISABLED FRIENDLY WASHROOM (Ladies)



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