



NO.: CIVIL/CEC-1066/DHL-77 (2)

January 29, 2025

Action plan for restoration of Environment for Padmavati Associates — Pristine Prism and Pristine Royale and Pristine Privilege, Sr. No. 6/2,7 and Sr. No.6/5 CTS No. 2560(pt), at Aundh, District Pune.



Prepared by:

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Submitted to:

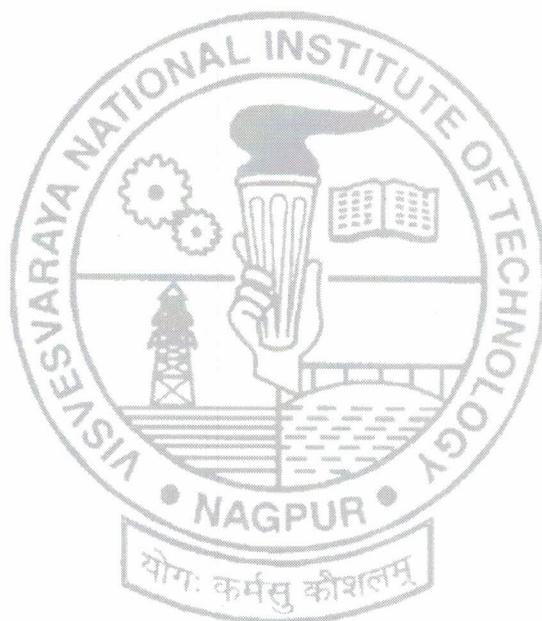
Maharashtra Pollution Control Board (MPCB)

Mumbai

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1. Introduction

1.1. Background

Maharashtra Pollution Control Board (MPCB) through letter No. BO/JD(APC)/TB/B-0037 dated 1st July 2024 had issued workorder to VNIT Nagpur for preparation of “**Action plan for restoration of Environment for Padmavati Associates — Pristine Prism and Pristine Royale and Pristine Privilege**”, Sr. No. 6/2,7 and Sr. No.6/5 CTS No. 2560(pt), at Aundh, District - Pune. This document constitutes the detailed report on the environmental damages and suitable recommendations.

1.2. Methodology

Dr. Dilip H. Lataye, Professor and Dr. Karthik Balasundaram, Assistant Professor, from Department of Civil Engineering, VNIT Nagpur visited the sites, Pristine Prism, Pristine Royale and Pristine Privilege, Sr. No. 6/2,7 and Sr. No.6/5 CTS No. 2560(pt), at Aundh, District - Pune on 3rd October 2024. The property is a residential space. The methodology to assess the environmental damage involved the following:

1. Visual inspection was carried out throughout the site for assessment of environmental loss with respect to all the possible environmental and ecological factors.
2. Desk based review of documents to check for the various compliances and to evaluate the historic data.

2. Project Details

2.1. Project proponent details

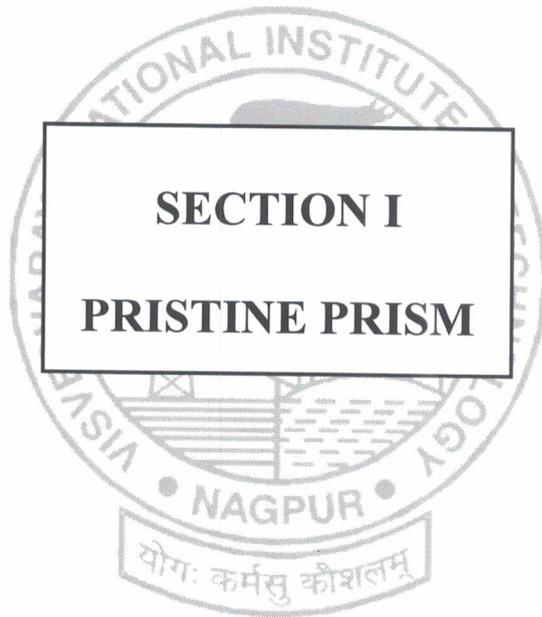
Name of Project Proponent	Padmavati Associates
Registered Address	501/501 Fortune House, Prabhat Road Pune
Correspondence Address	501/501 Fortune House, Prabhat Road Pune
Contact Person	Mr. Prashant Sharma
Designation	CEO
Mobile number	9822541999
Email id	sharma.prashant178@ gmail.com



2.2. Project Location Details

Sr.no	Particular	Detail
1	Location	Pune
2	Survey no	6/2, 7
3	Village	Aundh
4	Tehsil	Khatav
5	District	Pune
6	State	Maharashtra
7	GPS coordinates	18°34'02" N & 73°48'52" E
8	Nearest Railway station	Pune Junction
9	Municipal Corporation Details	Pune Municipal Corporation





1. Description of the Project

Name of Project	Pristine Prism
Total Plot area (Pristine Prism and Pristine Royal)	24250 sq. m.
Total open area (Pristine Prism and Pristine Royal)	1998 sq. m.
FSI Area (Pristine Prism and Pristine Royal)	27341.01
Non-FSI Area (Pristine Prism and Pristine Royal)	28521.24
Total BUA (Pristine Prism and Pristine Royal)	55862.25 sq. m.
Construction start date	25-07-2012
Construction end date	13-06-2015
Occupation start date	23-07-2015
Type of land on which project is built	Residential
Building Configuration (Pristine Prism)	
A1	Parking +13
A2	Parking +15
B1	Parking +12
B2	Parking +15
B3	Parking +12
Total number of flats	251
Population (assuming 4 members in one flat)	1004
No of 2-wheelers in society	516 approximately
No of 4-wheelers in society	193 approximately

2. Environmental Impact

This section provides the details about the assessment of various environmental damages.

2.1. Impact on Air Quality

Observations:

- On the day of visit no significant impact was observed on the air quality.
- The only source of air pollution found on the site was DG set of 160 KVA.
- The DG sets were enclosed in the acoustic enclosure. The canopy to protect the DG set from the rain was absent in the Prism premises.
- The stack of the DG set was at low height.
- As per the information provided, the DG set is operated as backup source during the electricity failure from Maharashtra State Electricity Board (MSEB).
- Details regarding the air quality of emissions from the DG set were not available. Hence, the status of the pollution control cannot be verified

Recommendations:

- It is recommended that the monitoring of air quality emissions from the DG set be carried out periodically.



2.2. Impact on Water Quality & Quantity

Observations:

- The occupants use piped water supplied by the Pune Municipal Corporation (PMC).
- No groundwater is used as there are no operational borewells on the site.
- Water consumed by occupants of Prism (for domestic purpose):
 - No. of flats = 251
 - Occupants per flat: 4
 - Water consumed per person: 200 litres per person per day (high income group with full flushing system)
 - **Total water consumed for domestic purpose annually = $200 \times 4 \times 251 \times 365 = 72$ million litres (A)**
 - No. of 2 wheelers = 516 (approximately)
 - No of 4 wheelers = 193 (approximately)
 - Water required to clean 2 wheelers once a week = 40 litres
 - Water required to clean 4 wheelers once a week = 80 litres
 - **Water required for vehicle cleaning (annually) = $[(516 \times 40) + (193 \times 80)] \times 52 = 1.8$ million litres (B)**
 - Capacity of rooftop rainwater harvesting provided = 1792170 litres = 1.8 million litres (approximately).
 - Sewage generated on site = $0.8 \times 200 \times 4 \times 251 = 160640$ litres
 - Capacity of sewage treatment plant (STP) provided on site = 160 KL
 - Mode of disposal of treated water: Discharged to public sewer, No recycling of treated effluent is done
 - Therefore, treated water available per day (assuming 10% losses) = approximately 140 KL

Recommendations:

- The society consumes approximately 72 million litres water annually and harvests approximately 1.8 million litres which is around 2.5%. This proportion is negligible. It is recommended that a thorough hydrogeological survey of the underground aquifer be performed and the entire capacity of the aquifer be used to harvest the rain water.
- It is recommended that the treated water from STP be used for toilet flushing and landscaping to minimise the use of fresh water
- It is observed that the occupants use approximately 1.8 million litres of municipal water annually for washing their 2 and 4 wheelers. It is recommended that treated water from the STP be used for washing the 2 and 4 wheelers.
- To the extent possible the treated effluent from the STP shall be used for fulfilling the non-potable water demand.
- The possibility of using the treated sewage by PMC should be explored.
- Quality of treated effluent should be monitored on a regular basis (at least once in a month)

2.3. Impact due to Solid Waste Generation

Observations

- No of flats = 251
- Occupants per flat: 4 (assumption)



- Solid waste generated (assuming 0.35 kg/day) = approximately 350 kg/day
- Waste segregation is practiced in the society.
- The society has an operational organic waste converter (OWC) of 130 kg/day organic waste processing capacity.
- Assuming 50% of organic matter, the organic fraction would be approximately 175 kg/day. The installed OWC capacity is on the lower side with respect to the organic waste generation.
- As per information provided by the PP, part of the compost produced is used within the premises for landscaping and the remaining part is given to outside users. No documentary evidence was provided to support this claim.
- The inorganic waste is handed over to the PMC sanitation services.

Recommendations

- No significant impact on environment was observed due to generation of solid waste
- It is recommended that a higher capacity OCW be installed in the society.
- It is recommended to maintain a record of the compost produced, used and distributed for reference.

2.4. Impact on Land

Observations

- As per the documents provided by the PP, the society was constructed on a “Residential” land as classified by the PMC. As such there was no destruction of any natural habitat during the construction of the society.
- As per the PP, the topsoil was used for the landscaping. However, no comments can be made about this claim.
- The entire ground is concrete paved within the building premises.
- No provision for rain water percolation to the ground or surface rainwater harvesting. Surface runoff is discharged into public stormwater drains.

Recommendations

- It is recommended to replace the concrete pavement by grass pavers for parking and driveways.
- It is recommended to augment the rain water harvesting capacity by diverting the surface runoff from paved areas into recharge pits or holes.

2.5. Green Belt

Observations

- There are approximately 250 trees planted within the premises.
- As per clause no 6 in the certificate to commence construction issued by PMC, it is mentioned that “*every owner should plant at least 4 trees and ensure their proper growth*”. As per this clause the number of trees in the premises should have been at least 1000. However, the actual number of trees are much less than the prescribed number.

Recommendations

- Tree plantation should be carried out to achieve the number of trees as mentioned in the certificate by PMC



- If sufficient space is not available within the premises, then arrangements shall be made to plant the trees in nearby location in consultation with PMC. Options like Miyawaki forest, dense plantations, micro forests can be explored.

2.6. Renewable Energy Utilisation

Observations

- The society generates 300 units of solar energy per day which is approximately 1 unit per flat.

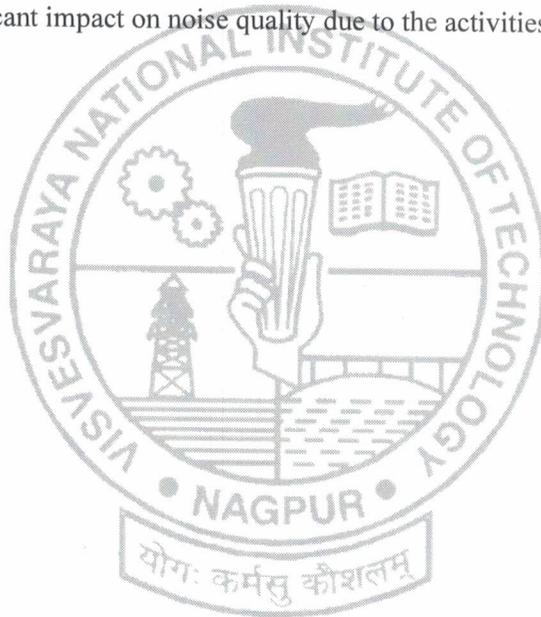
Recommendations

- It is recommended that the society should enhance the solar energy generation capacity and aim to achieve at least 1% of the connected load capacity through solar power.
- All the lightings in common areas should be connected to solar energy.

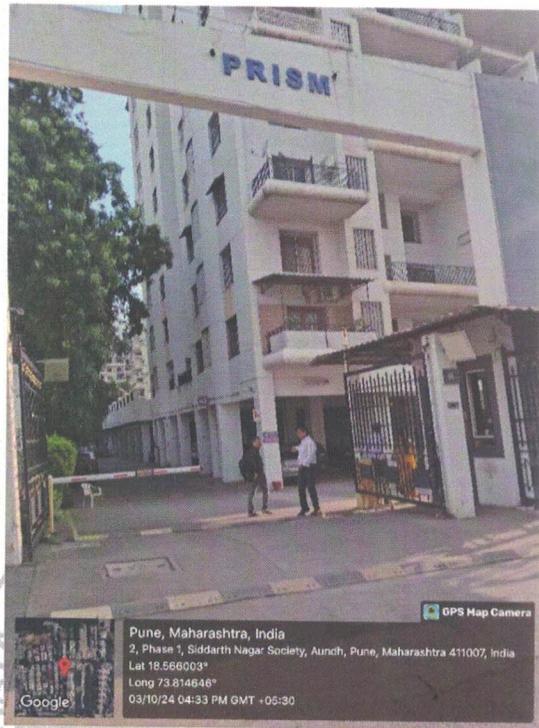
2.7. Impact on Noise Levels

Observations

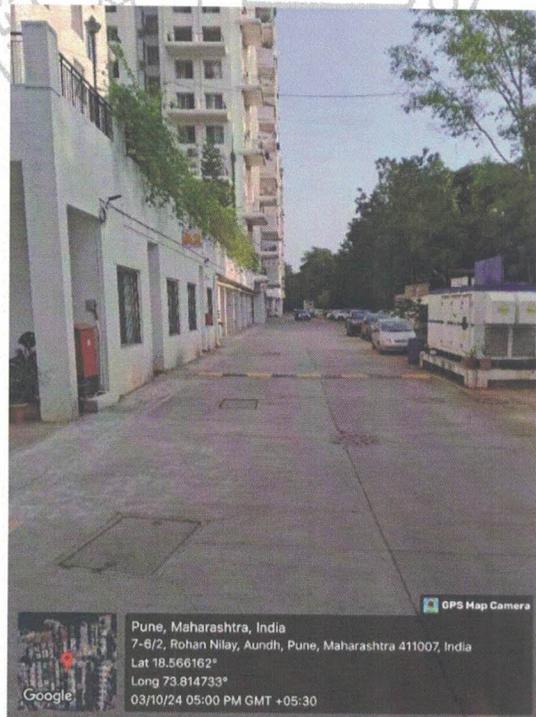
- There is no significant impact on noise quality due to the activities of the society.



3. Site Photographs

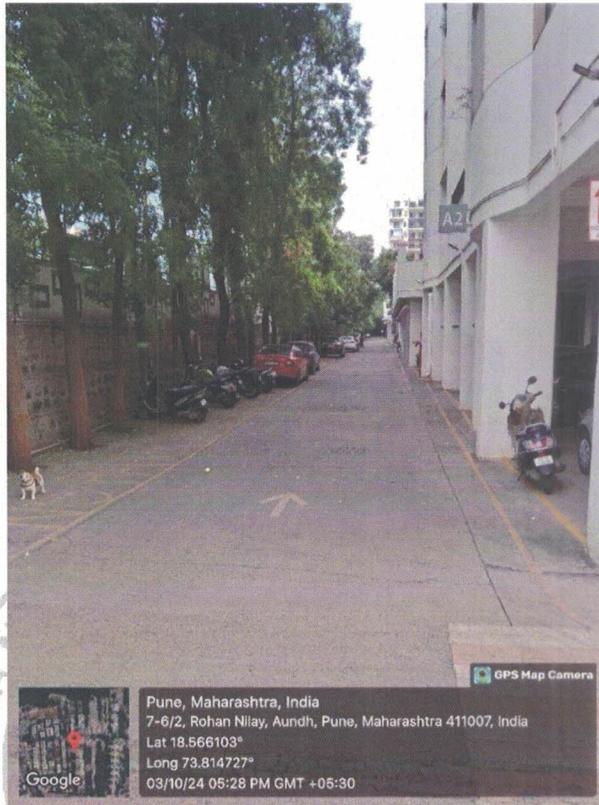


Picture 1: Entrance to Site



Picture 2: View of East side of the society



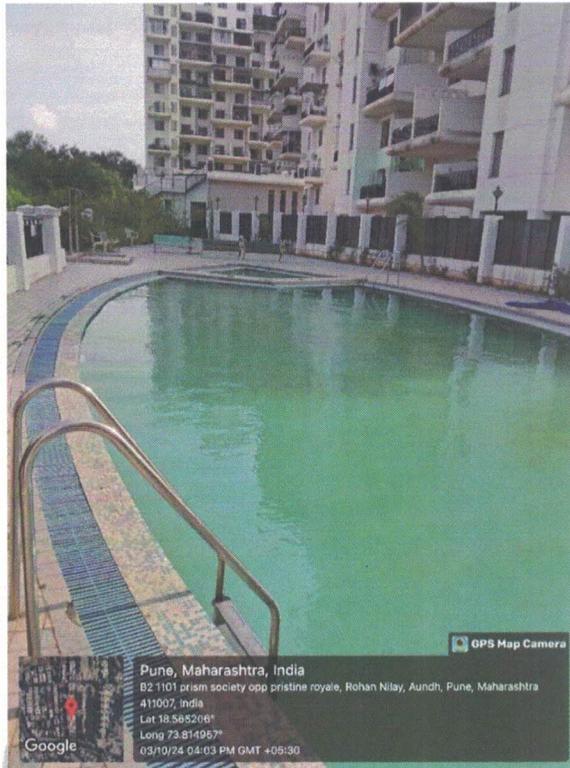


Picture 3: View of West side of the society

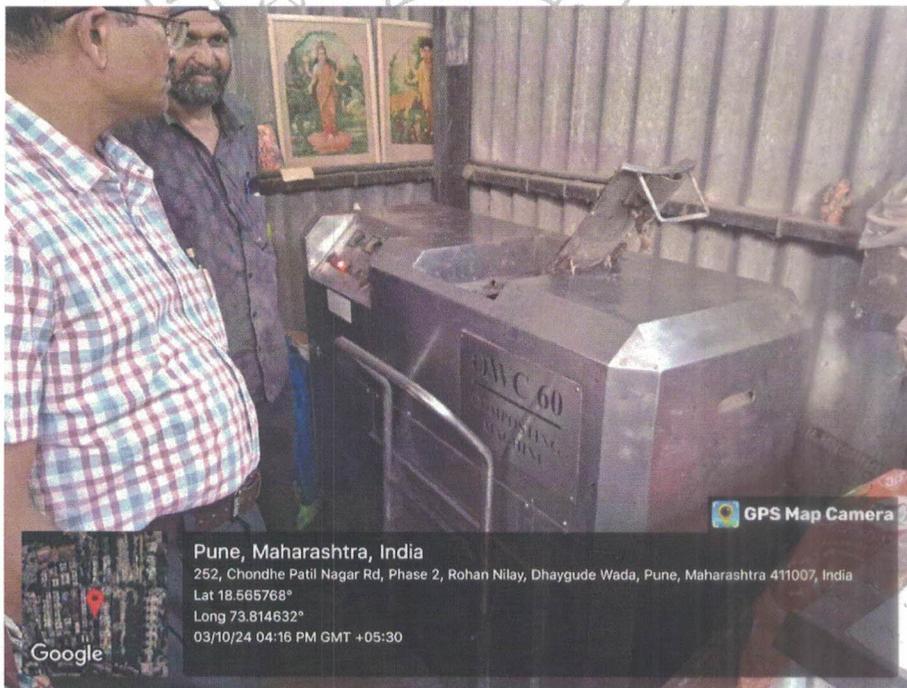


Picture 4: View of parking area of the society



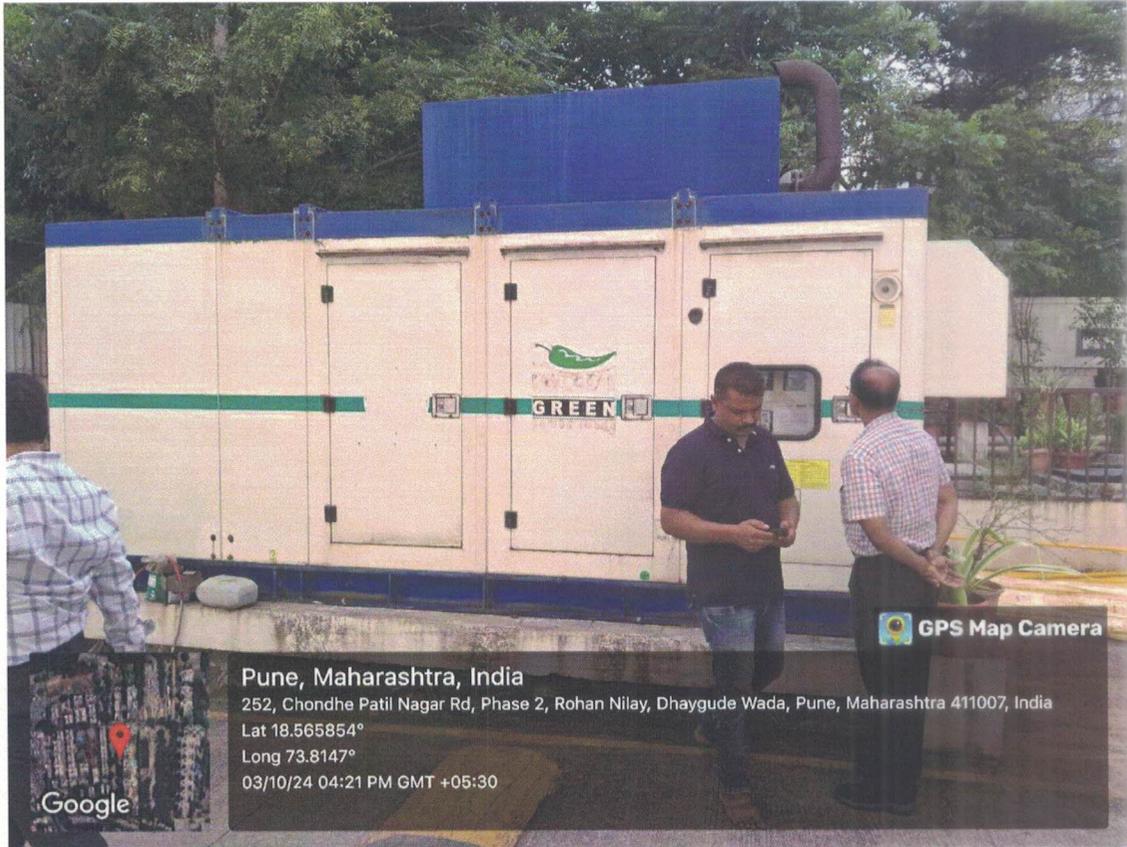


Picture 5: View of swimming pool situated on podium



Picture 6: View of OWC installed on site





Pune, Maharashtra, India
252, Chondhe Patil Nagar Rd, Phase 2, Rohan Nilay, Dhaygude Wada, Pune, Maharashtra 411007, India
Lat 18.565854°
Long 73.8147°
03/10/24 04:21 PM GMT +05:30

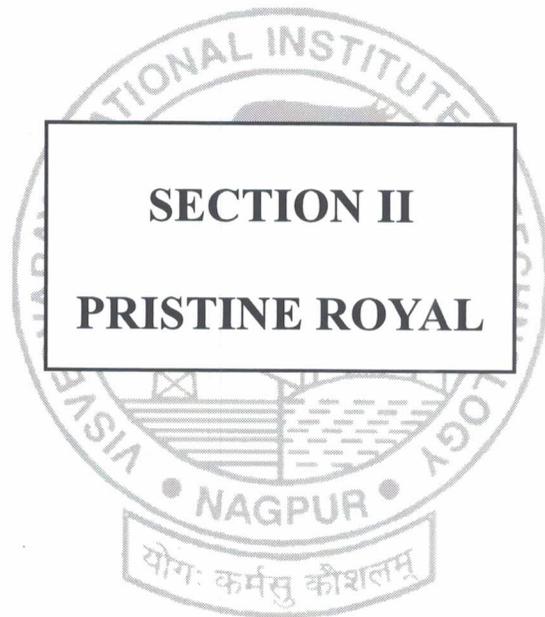
Picture 7: View of DG set installed on site



Pune, Maharashtra, India
2, Phase 1, Siddarth Nagar Society, Aundh, Pune, Maharashtra 411007, India
Lat 18.566035°
Long 73.81465°
03/10/24 04:23 PM GMT +05:30

Picture 8: View of STP set installed on site





1. Description of the Project

Name of Project	Pristine Royal
Total Plot area (Pristine Prism and Pristine Royal)	24250 sq.m
Total open area (Pristine Prism and Pristine Royal)	1998 sq.m .
FSI Area (Pristine Prism and Pristine Royal)	27341.01
Non-FSI Area (Pristine Prism and Pristine Royal)	28521.24
Total BUA (Pristine Prism and Pristine Royal)	55862.25 sq.m
Construction start date	25-07-2012
Construction end date	13-06-2015
Occupation start date	23-07-2015
Type of land on which project is built	Residential
Building Configuration (Pristine Prism)	
C1	Parking +10
C2	Parking +10
Total number of flats	58
Population (assuming 4 members in one flat)	232
No of 2 wheelers in society	116 approximately
No of 4 wheelers in society	58 approximately

2. Environmental Impact

This section provides the details about the assessment of various environmental damages

2.1. Impact on Air Quality

Observations:

- On the day of visit no significant impact was observed on the air quality.
- The only source of air pollution found on the site was DG set of 125 KVA.
- The DG sets were enclosed in the acoustic enclosure and canopy to protect the DG from the rain.
- The stack of the DG set was at low height.
- As per the information provided, the DG set is operated as backup source during the electricity failure from Maharashtra State Electricity Board (MSEB).
- Details regarding the air quality of emissions from the DG set were not available. Hence, the status of the pollution control cannot be verified.

Recommendations:

- It is recommended that the monitoring of air quality emissions from the DG sets be carried out periodically.

2.2. Impact on Water Quality & Quantity

Observations:

- The occupants use piped water supplied by the Pune Municipal Corporation (PMC).
- No groundwater is used, as there are no operational borewells on the site.



- Water consumed by occupants of Prism (for domestic purpose):
 - No of flats = 58
 - Occupants per flat: 4
 - Water consumed per person: 200 litres per person per day (high income group with full flushing system)
 - **Total water consumed for domestic purpose annually = $200 \times 4 \times 58 \times 365 = 17$ million litres (A)**
 - No of 2 wheelers = 116 (approximately)
 - No of 4 wheelers = 58 (approximately)
 - Water required to clean 2 wheeler once a week = 40 litres
 - Water required to clean 4 wheeler once a week = 80 litres
 - **Water required for vehicle cleaning (annually) = $[(116 \times 40) + (58 \times 80)] \times 52 = 0.48$ million litres (B)**
 - Capacity of rooftop rainwater harvesting provided = 8,92,193 litres = 0.9 million litres (approximately). **No proof provided by the PP for rainwater harvesting design**
 - Sewage generated on site (per day) = $0.8 \times 200 \times 4 \times 58 = 37120$ litres
 - No STP provided for treatment.
 - Mode of disposal of treated water: Discharged to public sewer,

Recommendations:

- The society consumes approximately 17 million litres water annually and harvests approximately 0.9 million litres which is around 5%. This proportion is negligible. It is recommended that a thorough hydrogeological survey of the underground aquifer be performed and the entire capacity of the aquifer be used to harvest the rain water.
- It is recommended that a STP be installed on site and the treated water from STP be used for toilet flushing and landscaping to minimise the use of fresh water
- It is observed that the occupants use approximately 0.48 million litres of municipal water annually for washing their 2 and 4 wheelers. It is recommended that treated water from the STP be used for washing the 2 and 4 wheelers.
- To the extent possible the treated effluent from the STP shall be used for fulfilling the non-potable water demand.
- The possibility of using the treated sewage by PMC should be explored.
- Quality of treated effluent should be monitored on a regular basis (at least once in a month)

2.3. Impact due to Solid Waste Generation

Observations

- No of flats = 58
- Occupants per flat: 4 (assumption)
- Solid waste generated (assuming 0.35 kg/day) = approximately 81 kg/day
- Constructed compost bins were observed on site. However, they were non-functional on the day of visit.
- The compost bins were lacking maintenance. Leachate was seeping out from the compost bins.
- The solid waste is handed over to the PMC sanitation services.



Recommendations

- No significant impact on site environment was observed due to generation of solid waste
- It is recommended that a OWC be installed in the society to convert the organic waste to compost.
- The existing compost bins be repaired on priority. The seeping of leachate from the bins should be stopped immediately
- It is recommended to maintain a record of the compost produced, used and distributed for reference.

2.4. Impact on Land

Observations

- As per the documents provided by the PP, the society was constructed on a “Residential” land as classified by the PMC. As such there was no destruction of any natural habitat during the construction of the society.
- As per the PP, the topsoil was used for the landscaping. However, no comments can be made about this claim.
- The entire ground is concrete paved within the building premises.
- No provision for rain water percolation to the ground or surface rainwater harvesting. Surface runoff is discharged into public stormwater drains.

Recommendations

- It is recommended to replace the concrete pavement by grass pavers for parking and driveways.
- It is recommended to augment the rain water harvesting capacity by diverting the surface runoff from paved areas into recharge pits or holes.

2.5. Green Belt

Observations

- There are approximately 150 trees planted within the premises.
- As per clause no 6 in the certificate to commence construction issued by PMC, it is mentioned that “*every owner should plant at least 4 trees and ensure their proper growth*”. As per this clause the number of trees in the premises should have been at least 250. However, the actual number of trees are much less than the prescribed number.

Recommendations

- Tree plantation should be carried out to achieve the number of trees as mentioned in the certificate by PMC
- If sufficient space is not available within the premises, then arrangements shall be made to plant the trees in nearby location in consultation with PMC. Options like Miyawaki forest, dense plantations, micro forests can be explored.

2.6. Renewable Energy Utilisation

Observations

- The society has 3000 Liters per day of solar water heater which is approximately 14 litres per person per day.

Recommendations



- It is recommended that the society should enhance the solar energy generation capacity and aim to achieve at least 1% of the connected load capacity through solar power.
- All the lightings in common areas should be connected to solar energy.

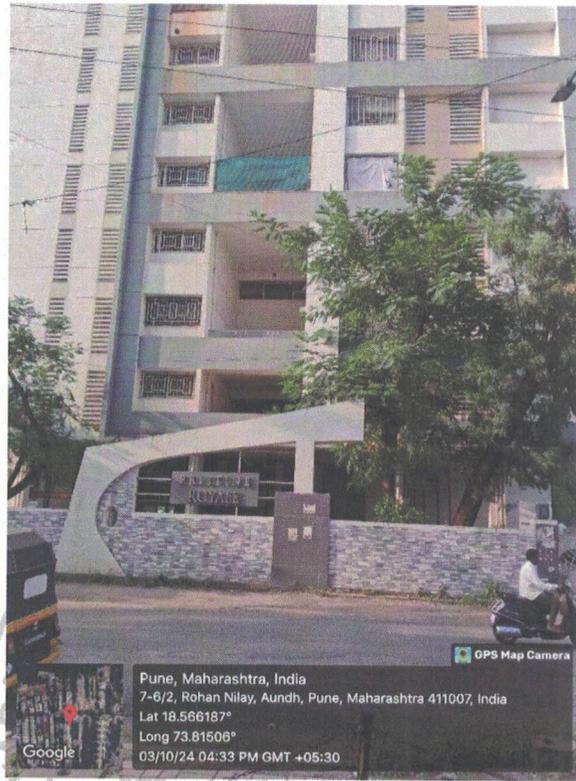
2.7. Impact on Noise Levels

Observations

- There is no significant impact on noise quality due to the activities of the society.



3. Site Photographs

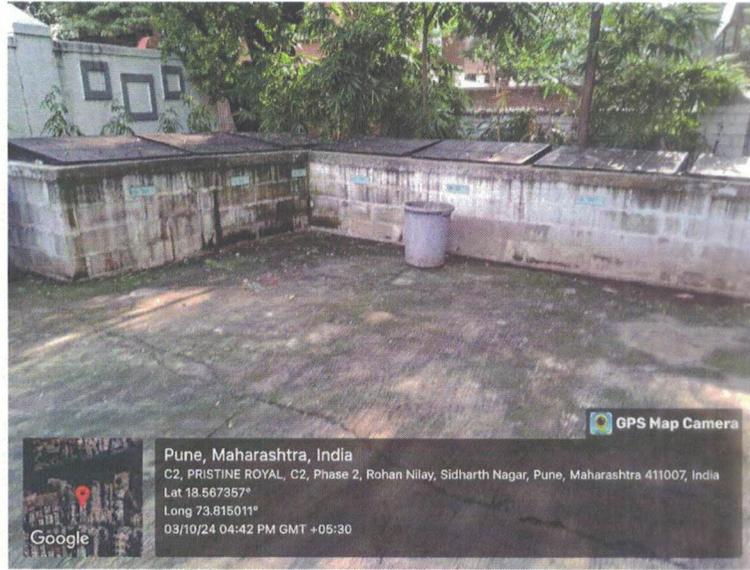


Picture 1: Entrance to Site



Picture 2: Green belt and open area on Site





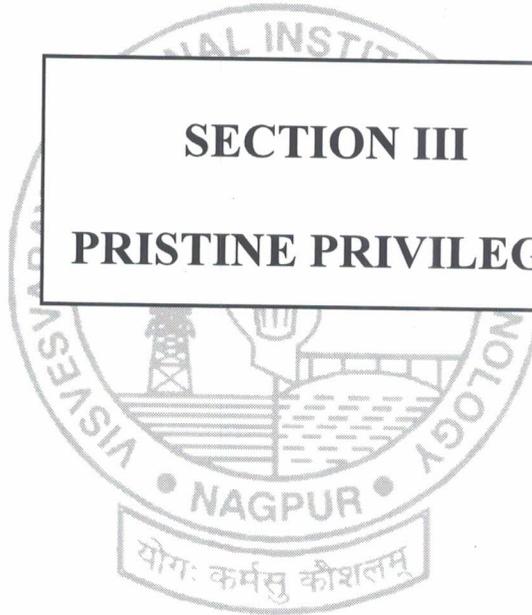
Picture 3: Non-operational compost bins on site



Picture 4: DG set with acoustic enclosure and canopy on site



SECTION III
PRISTINE PRIVILEGE



1. Description of the Project

Name of Project	Pristine Privilege
Total Plot area	3800 sq. m.
Total open area	31.16 sq. m.
FSI Area	2777.96 sq. m.
Non-FSI Area	2195.78 sq. m.
Total BUA	4973.74 sq. m.
Construction start date	25-06-2012
Construction end date	17-05-2014
Occupation start date	20-05-2014
Type of land on which project is built	Residential
Building Configuration	
A	Parking +5
B	Parking +5
Total no of flats	40
Population (assuming 4 in one flat)	160
No of 2wheelers in society	82 (approximately)
No of 4 wheelers in society	31 (approximately)

2. Environmental Impact

This section provides the details about the assessment of various environmental damages

2.1. Impact on Air Quality

Observations:

- On the day of visit no significant impact was observed on the air quality.
- The only source of air pollution found on the site was DG set of 35 KVA.
- The DG sets were enclosed in the acoustic enclosure. The DG set is exposed to the rain.
- The stack of the DG set was at low height.
- As per the information provided, the DG set is operated as backup source during the electricity failure from Maharashtra State Electricity Board (MSEB).
- Details regarding the air quality of emissions from the DG set were not available. Hence, the status of the pollution control cannot be verified.

Recommendations:

- It is recommended that the monitoring of air quality emissions from the DG sets be carried out periodically.
- The DG set be enclosed in a canopy to protect it from rain.

2.2. Impact on Water Quality & Quantity

Observations:

- The occupants use piped water supplied by the Pune Municipal Corporation (PMC).
- No groundwater is used as there are no operational borewells on the site.
- Water consumed by occupants of Prism (for domestic purpose):



- No of flats = 40
- Occupants per flat: 4
- Water consumed per person: 200 litres per person per day (high income group with full flushing system)
- **Total water consumed for domestic purpose annually**= $200 \times 4 \times 40 \times 365 = 12$ million litres (A)
- No of 2 wheelers = 82 (approximately)
- No of 4 wheelers = 31 (approximately)
- Water required to clean 2 wheeler once a week = 40 litres
- Water required to clean 4 wheeler once a week = 80 litres
- **Water required for vehicle cleaning (annually)** = $[(82 \times 40) + (31 \times 80)] \times 52 = 0.3$ million litres (B)
- Capacity of rooftop rainwater harvesting provided = 5,94,795 litres = 0.6 million litres (approximately).
- Sewage generated on site (per day) = $0.8 \times 200 \times 4 \times 40 = 25600$ litres
- No STP provided for treatment.
- Mode of disposal of treated water: Discharged to public sewer,

Recommendations:

- The society consumes approximately 12 million litres water annually and harvests approximately 0.6 million litres which is around 5%. This proportion is negligible. It is recommended that a thorough hydrogeological survey of the underground aquifer be performed and the entire capacity of the aquifer be used to harvest the rain water.
- It is recommended that a STP be installed on site and the treated water from STP be used for toilet flushing and landscaping to minimise the use of fresh water
- It is observed that the occupants use approximately 0.3 million litres of municipal water annually for washing their 2 and 4 wheelers. It is recommended that treated water from the STP be used for washing the 2 and 4 wheelers.
- To the extent possible the treated effluent from the STP shall be used for fulfilling the non-potable water demand.
- The possibility of using the treated sewage by PMC should be explored.
- Quality of treated effluent should be monitored on a regular basis (at least once in a month)

2.3. Impact due to Solid Waste Generation

Observations

- No of flats = 40
- Occupants per flat: 4 (assumption)
- Solid waste generated (assuming 0.35 kg/day) = approximately 56 kg/day
- The PP had provided an OWC at the site. However, the OWC was not available on site on the day of visit.
- The solid waste is handed over to the PMC sanitation services.

Recommendations

- No significant impact on site environment was observed due to generation of solid waste



- It is recommended that a OWC be installed in the society to convert the organic waste to compost.
- It is recommended to maintain a record of the compost produced, used and distributed for reference.

2.4. Impact on Land

Observations

- As per the documents provided by the PP, the society was constructed on a “Residential” land as classified by the PMC. As such there was no destruction of any natural habitat during the construction of the society.
- As per the PP, the topsoil was used for the landscaping. However, no comments can be made about this claim.
- The entire ground is concrete paved within the building premises.
- No provision for rain water percolation to the ground or surface rainwater harvesting. Surface runoff is discharged into public stormwater drains.

Recommendations

- It is recommended to replace the concrete pavement by grass pavers for parking and driveways.
- It is recommended to augment the rain water harvesting capacity by diverting the surface runoff from paved areas into recharge pits or holes.

2.5. Green Belt

Observations

- There are approximately 56 trees planted within the premises.
- As per clause no 6 in the certificate to commence construction issued by PMC, it is mentioned that “*every owner should plant at least 4 trees and ensure their proper growth*”. As per this clause the number of trees in the premises should be at least 150. However, the actual number of trees are much less than the prescribed number.

Recommendations

- Tree plantation should be carried out to achieve the number of trees as mentioned in the certificate by PMC
- If sufficient space is not available within the premises, then arrangements shall be made to plant the trees in nearby location in consultation with PMC. Options like Miyawaki forest, dense plantations, micro forests can be explored.

2.6. Renewable Energy Utilisation

Observations

- The society generates 17 KW of solar energy.

Recommendations

- It is recommended that the society should enhance the solar energy generation capacity and aim to achieve at least 1% of the connected load capacity through solar power.
- All the lightings in common areas should be connected to solar energy.



2.7. Impact on Noise Levels

Observations

- There is no significant impact on noise quality due to the activities of the society.



3. Site Photographs

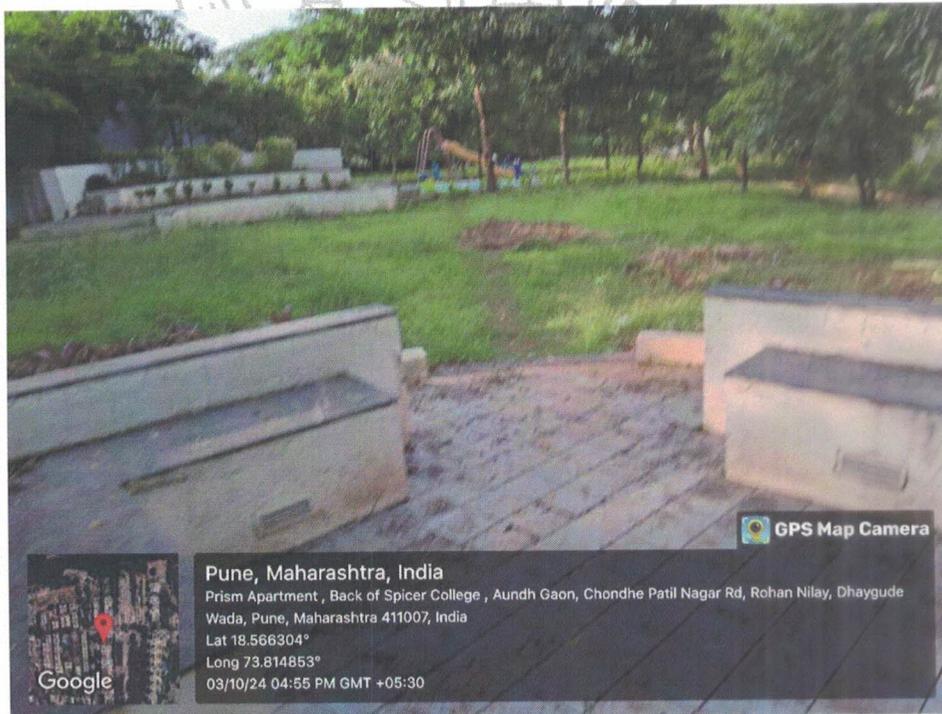


Picture 1: Entrance to site





Picture 2: DG set with acoustic enclosure and canopy on site



Picture 3: Open area and green belt on site

4. Summary and Conclusion

A team of Dr. Dilip H. Lataye and Dr. Karthik Balasundaram, from Department of Civil Engineering, VNIT Nagpur visited the site Pristine Prism, Pristine Royale and Pristine Privilege, Sr. No. 6/2,7 and Sr. No.6/5 CTS No. 2560(pt), at Aundh, District Pune on 3rd October 2024 to assess the environmental damages and recommend restoration plan.

During the visit, it was observed that there was no significant impact on air quality, land degradation, solid waste generation and noise levels due to the projects. The team observed that the projects have insufficient measures to conserve water. The project is a net water consumer and less than 5% of the total water quantity consumed is harvested. Also, two projects “Pristine Royal” and “Pristine Privilege” do not have STP. Further, “Pristine Prism” do not reuse the effluent from the STP and it is disposed in public sewer. These water management practices are not sustainable in the long run.

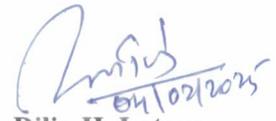
The team observed that the green belt provided is not sufficient and does not confirm to the condition mentioned by Pune Municipal Corporation.

The project needs to augment the renewable energy generation and implement measures to conserve electricity.

To conclude, it is strongly recommended that the project should implement the recommendations mentioned in this report to minimise the overall environmental damage.



Karthik Balasundaram
(Assistant Professor and Coordinator)



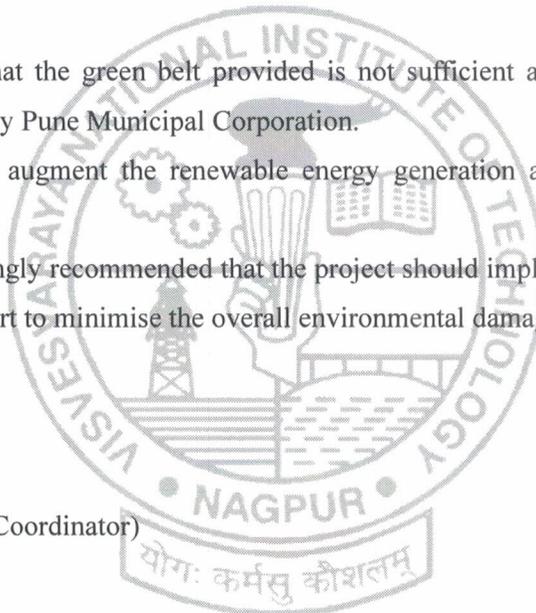
Dilip H. Lataye
(Professor & Coordinator)



Dilip H. Lataye
(Head, Civil Engineering Department)



Dr. Yashwant B. Katpatal
(Professor & Dean (R&C))



Note: This report has been prepared based on the observations during the visit on site and the data, information and clarifications made available by the Project Proponent **M/s Padmavati Associates, 501/501 Fortune House, Prabhat Road, Pune**. VNIT shall not be responsible for any consequences due to incorrect data/ information furnished by **M M/s Padmavati Associates** or due to any reasons beyond the control of VNIT. This report shall not form a document in any dispute/litigation.

