

**Minutes of the 95<sup>th</sup> Goa State Expert Appraisal Committee  
(Goa-SEAC) meeting held on 22<sup>nd</sup> June 2018 at 11.30 a.m. in the  
Conference Room of the EIA Secretariat, O/o Goa State Pollution Control  
Board (GSPCB), Patto-Panaji.**

The ninety fifth meeting of the Goa-SEAC was held on 22<sup>nd</sup> June 2018 in the Conference room of the GSPCB at 11.30 am under the Chairmanship of Prof. Suhas Godse. The list of members who attended the meeting is at Annexure – I.

At the beginning Chairman welcomed the members and requested Secretary, SEAC to proceed as per the Agenda items (refer Annexure – 2).

1. Representative of Goa housing Board made the project-specific presentation on behalf of PP w.r.t. project proposal seeking environmental clearance (EC) for the proposed residential development at **(Plot H1)** by Goa Housing Board at Colvale, Bardez, Goa. The project Proposal was discussed on the basis of documents submitted by the proponent. All issues related to environment including air, land, soil, ecology and biodiversity and social aspects were discussed. Committee noted that the project is under **8a (B2) category of EIA Notification 2006 (building & constructions)**. Further documents like Consolidated statements, Form I and IA. Brief extract of the project details submitted by Project Proponent is as below:

Sr.No	Description	Details
1.	Name & location of the project	<b>Plot H1</b>  Residential Development for Goa Housing Board at Colvale, Bardez North, Goa.
2	Plot Area	34,574 sqm
3	Net Plot Area	34,574 sqm
4	FSI Area Non-FSI Area Total Construction Area Building Configuration & Height of Building	39,248.48 sqm 28,914.82 sqm 68,163.30 sqm 1BHK Apartment in Stilt + 7 floors Total Ht. of Bldg: 23.35m
5	No. of Shops	Nil
6	Total water requirement (construction / operation phase)	Domestic Water: 390 m <sup>3</sup> / day  Flushing from STP: 197 m <sup>3</sup> /day
7	Sewage Generation	469 m <sup>3</sup> / day

	STP Capacity	509 m <sup>3</sup> / day
8	Total Solid Waste Quantities	Bio Degradable: 817 kg Non Bio Degradable: 1225 kg
9	RG Area	Not Applicable as plot is part of a larger layout and RG provided for entire layout. Open green of 1640 sq.m provided internally
10	No. of Trees	NA
11	Energy Efficiency	NA
12	Parking 4W and 2W	4 W: 846 nos
13	Power Requirement	3.0 MW
14	D.G. set Capacity	1 no 500 KVA
15	RWH tank Capacity	Tank not Provided. 23nos recharge pits provided.
16	EMP cost (including DMP cost)	NA
17	No. of Trees to be cut	NA
18	No. of Trees to be planted on Site	As per Bio Diversity Report
19	CRZ Status	Not Applicable

Goa-SEAC conducted site inspection on 12<sup>th</sup> May 2018 wherein the committee sought following compliances prior to call the proponent for presentation:

- A.** Details regarding provision while constructing the roof-tops at the time of construction stage only to enable installation of solar panels towards south facing walls as and when made applicable in future.
- B.** Details on rainwater harvesting proposed at site.
- C.** Separation of grey and black water should be done by the use of dual plumbing system.
- D.** In case of single stack system separate recirculation lines for flushing by giving dual plumbing system be done.
- E.** Details on use of fire hydrant and safety measures for workers during construction and Proposed dust mitigation measures.

Project proponent clarified on above mentioned compliances before the committee during project specific presentation. Committee noted the same and after detailed discussions and deliberations, decided to recommend the proposal to the Authority for the grant of prior environmental clearance (EC) with following specific conditions.

- i.** Project Proponent should refer the proposed drainage plan to the Water Resources Department (WRD) for their examination and recommendations.

- ii.** PP should prioritize the issues related to health and hygiene in complying with the matters related to waste disposal and treatment / air and water pollution / waste-water management.
  
- iii.** PP needs to ensure that no treated water or any waste sewage shall be discharged into any water body..
  
- iv.** E-waste shall be disposed through Authorised vendor as per E-waste (*Management and Handling*) Rules, 2011.
  
- v.** Project Proponent (PP) should necessarily make appropriate provision while constructing the roof-tops at the time of construction stage only to enable installation of solar panels towards south facing walls as and when made applicable in future.
  
- vi.** The Project Proponent shall utilise fly ash bricks in masonry works.
  
- vii.** The PP shall use construction debris for land filling wherever applicable.
  
- viii.** At least 20% of the open spaces as required by the local building bye-laws shall be pervious. Use of Grass pavers, paver blocks with at least 50% opening, landscape etc. would be considered as pervious surface.
  
- ix.** Compliance with the Energy Conservation Building Code (ECBC) of Bureau of Energy Efficiency shall be ensured. Buildings in the States which have notified their own ECBC, shall comply with the State ECBC. Outdoor and common area lighting shall be LED. Concept of passive solar design that minimize energy consumption in buildings by using design elements, such as building orientation, landscaping, efficient building envelope, appropriate fenestration, increased day lighting design and thermal mass etc. shall be incorporated in the building design. Wall, window, and roof u-values shall be as per ECBC specifications.
  
- x.** Use of water saving devices/ fixtures (viz. low flow flushing systems; use of low flow faucets tap aerators etc) for water conservation shall be incorporated in the building plan.

- xi.** Installation of dual pipe plumbing for supplying fresh water for drinking, cooking and bathing etc and other for supply of recycled water for flushing, landscape irrigation, car washing, thermal cooling, conditioning, etc. shall be done.
  
- xii.** Separation of grey and black water should be done by the use of dual plumbing system. In case of single stack system separate recirculation lines for flushing by giving dual plumbing system be done.
  
- xiii.** Solar based electric power shall be provided to each unit for at least two bulbs/light and one fan. As proposed, central lighting and street lighting shall also be based on solar power.
  
- xiv.** The project proponent will provide landscape bed of 600mm wide X 600mm deep along the periphery of the plot to carry out plantation of trees. The treated water from the sewage treatment plant will be pumped through high flow drips on these beds to prevent outflow of treated sewage water outside the premises.
  
- xv.** PP shall make provision for charging points for electronic vehicles in the parking area.
  
- xvi.** PP should implement Dust mitigation measures for construction activities such as:
  - a. Roads leading to or at construction sites must be paved and blacktopped (i.e. metallic roads).
  - b. No excavation of soil shall be carried out without adequate dust mitigation measures in place.
  - c. No loose soil or sand or Construction & Demolition Waste or any other construction material that causes dust shall be left uncovered.
  - d. Wind-breaker of appropriate height i.e. 1/3rd of the building height and maximum up to 10 meters shall be provided.
  - e. Water sprinkling system shall be put in place.
  - f. Dust mitigation measures shall be displayed prominently at the construction site for easy public viewing.
  - g. New serial number 1070 has been inserted which relates to Mandatory Implementation of Dust Mitigation Measures for all Construction and Demolition Activities:

- h. Grinding and cutting of building materials in open area shall be prohibited.
  - i. Construction material and waste should be stored only within earmarked area and road side storage of construction material and waste shall be prohibited.
  - j. No uncovered vehicles carrying construction material and waste shall be permitted.
  - k. Construction and Demolition Waste processing and disposal site shall be identified and required dust mitigation measures be notified at the site.
  - l.
2. Representative Goa Housing Board made the project-specific presentation on behalf of PP w.r.t. project proposal seeking environmental clearance (EC) for the proposed residential development for Goa Housing Board at Colvale, Bardez. **(Plot H2)**. The project Proposal was discussed on the basis of presentation made and documents submitted by the proponent. All issues related to environment including air, land, soil, ecology and biodiversity and social aspects were discussed. Committee noted that the project is under **8a (B2) category of EIA Notification 2006 (building & constructions)**. Further documents like Consolidated statements, Form I and IA, site inspection held on 12<sup>th</sup> May 2018 project specific presentation and plans submitted are taken on the record. Brief extract of the project details submitted by Project Proponent is as below:

Sr.No	Description	Details
1.	Name & location of the project	<b>Plot H2</b>  Residential Development for Goa Housing Board at Colvale, Bardez North, Goa.
2	Plot Area	22,503 sqm
3	Net Plot Area	22,503 sqm
4	FSI Area Non-FSI Area Total Construction Area Building Configuration & Height of Building	25,865.72 sqm 15,081.91 sqm 40,947.63 sqm 1BHK Apartment in Stilt + 7 floors Total Ht. of Bldg: 23.35m
5	No. of Shops	Nil
6	Total water requirement (construction / operation phase)	Domestic Water: 217 m <sup>3</sup> / day  Flushing from STP: 110 m <sup>3</sup> /day
7	Sewage Generation	268 m <sup>3</sup> / day
	STP Capacity	284 m <sup>3</sup> / day

8	Total Solid Waste Quantities	Bio Degradable: 454 kg Non Bio Degradable: 681 kg
9	RG Area	Not Applicable as plot is part of a larger layout and RG provided for entire layout . Open green of 940 sqm provided internally
10	No. of Trees	NA
11	Energy Efficiency	NA
12	Parking 4W and 2W	4 W: 603 nos
13	Power Requirement	2.12 MW
14	D.G. set Capacity	1 no 320 KVA
15	RWH tank Capacity	Tank not Provided. 15nos recharge pits provided.
16	EMP cost (including DMP cost)	NA
17	No. of Trees to be cut	NA
18	No. of Trees to be planted on Site	As per Bio Diversity Report
19	CRZ Status	Not Applicable

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- iv.** E-waste shall be disposed through Authorised vendor as per E-waste (*Management and Handling*) Rules, 2011.
- v.** Project Proponent (PP) should necessarily make appropriate provision while constructing the roof-tops at the time of construction stage only to enable installation of solar panels towards south facing walls as and when made applicable in future.
- vi.** The Project Proponent shall utilise fly ash bricks in masonry works.
- vii.** The PP shall use construction debris for land filling wherever applicable.
- viii.** At least 20% of the open spaces as required by the local building bye-laws shall be pervious. Use of Grass pavers, paver blocks with at least 50% opening, landscape etc. would be considered as pervious surface.
- ix.** Compliance with the Energy Conservation Building Code (ECBC) of Bureau of Energy Efficiency shall be ensured. Buildings in the States which have notified their own ECBC, shall comply with the State ECBC. Outdoor and common area lighting shall be LED. Concept of passive solar design that minimize energy consumption in buildings by using design elements, such as building orientation, landscaping, efficient building envelope, appropriate fenestration, increased day lighting design and thermal mass etc. shall be incorporated in the building design. Wall, window, and roof u-values shall be as per ECBC specifications.
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  - c. No loose soil or sand or Construction & Demolition Waste or any other construction material that causes dust shall be left uncovered.
  - d. Wind-breaker of appropriate height i.e. 1/3rd of the building height and maximum up to 10 meters shall be provided.
  - e. Water sprinkling system shall be put in place.
  - f. Dust mitigation measures shall be displayed prominently at the construction site for easy public viewing.
  - g. New serial number 107ø has been inserted which relates to Mandatory Implementation of Dust Mitigation Measures for all Construction and Demolition Activities:
  - h. Grinding and cutting of building materials in open area shall be prohibited.
  - i. Construction material and waste should be stored only within earmarked area and road side storage of construction material and waste shall be prohibited.



- j. No uncovered vehicles carrying construction material and waste shall be permitted.
- k. Construction and Demolition Waste processing and disposal site shall be identified and required dust mitigation measures be notified at the site.

The meeting ended with vote of thanks to the Chair.

**Dr. Purushotam Pednekar** \_\_\_\_\_ *Sd/--* \_\_\_\_\_

**Dr. Nitin Sawant** \_\_\_\_\_ *Sd/-* \_\_\_\_\_

*Sd/-*  
**Shri. Sanjeev Joglekar**  
(Secretary Goa-SEAC)

*Sd/-*  
**Shri. Suhas Godse**  
(Chairman Goa-SEAC)

Place: Patto, Panaji  
Date: June 2018

#### ANNEXURE – I

#### List of members who attended the 95<sup>th</sup> Goa –SEAC meeting held on 22<sup>nd</sup> June 2018

- |                                    |                               |
|------------------------------------|-------------------------------|
| 1. Shri. Suhas Godse, Taleigao     | - <i>Chairman (Goa-SEAC)</i>  |
| 2. Dr. Purushotam Pednekar, Mapusa | - <i>Member (Goa-SEAC)</i>    |
| 3. Dr. Nitin Sawant                | - <i>Member (Goa-SEAC)</i>    |
| 4. Shri. Sanjeev Joglekar, Panaji  | - <i>Secretary (Goa-SEAC)</i> |