

**Minutes of the 92nd Goa State Expert Appraisal Committee
(Goa-SEAC) meeting held on 15th March 2018 at 3.30 p.m. in the
Conference Room of the EIA Secretariat, O/o Goa State Pollution Control
Board (GSPCB), Patto-Panaji.**

The ninety second meeting of the Goa-SEAC was held on 15th March 2018 in the Conference room of the GSPCB at 3.30 p.m. under the Chairmanship of Prof. Suhas Godse. The list of members who attended the meeting is at “Annexure – 1”.

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

1. Representative of M/s **Aditya Environmental Services Pvt. Ltd**, Mumbai made the project-specific presentation on behalf of PP w.r.t. project proposal seeking environmental clearance (EC) for Proposed construction of residential-cum-commercial complex at survey no. 117/1-A of Sancoale village in Mormugao taluka, South Goa by **M/s Trinitas Developers India LLP, Goa** . Brief extract of the project details submitted by Project Proponent is as below:

Sr.No	Description	Details
1	Name & location of the project	M/S Trinitas Developers India Ltd
2	Plot Area	8000.00 sq.m.
	Net plot Area	Total Plot Area: 8,000 Sq.m Deductions: Net Plot Area: 7787
4	FSI Area Non-FSI Area Total construction Area Building configuration & Height of the building	FSI area (sq. m.): 15,980.01 sq.m. 32,254.36 sq.m.
5	No. of shops	Construction of 1 building having 4 Wings Total 332 flats 1 BHK- 204 2BHK- 32 Studio-96
6	Total water requirement(Construction/operation phase)	Total water requirement = 167 cmd Fresh Water from PWD = 114 cmd Treated Water from STP =

		120cmd
7	Sewage generation	Sewage generated: 143 cmd
8	STP Capacity	STP capacity: STP of 145 cmd cmdMBBR
9	Total Solid Waste Quantities	Construction Phase : 1-2 MT/day Operation Phase : 747 kg/day
10	RG Area	
11	No. of trees	0
12	Energy Efficiency	
13	Parking 4 W and 2W	332 ECS
14	Power requirement	Source : GOA State Electricity Construction Phase : 20HP Operation Phase : 3000 KVA DG 2X160 Kg.day
15	D.G set Capacity	2 * 160 KVA (during power failure)
16	RWH tank capacity	
17	EMP cost (including DMP cost)	
18	No. of trees to be cut	Nil
19	No. of trees to be planted on site	50 nos
23	CRZ status	Not applicable

Earlier Goa-SEIAA issued Environment Clearance to the said project on 22/03/2013, Later Project Proponent submitted proposal seeking an amendment in EC due to proposed increase in total Built-up Area (BUA) – from 29, 385 sq.mts. to 32, 254 sq.mts., vis-a-vis related usage of resources (i.e. water usage from existing 109.65 CMD to 206 CMD), Accordingly Goa-SEIAA during its 33rd meeting held on 02/08/2016 decided that PP needs to re-submit a proposal afresh response to the conditions stipulated in the EC communication.

Accordingly project Proponent re-submitted the proposal on 10/02/2017 later the Goa-SEIAA/SEAC reconstituted by Ministry of Environment and Forest and Climate Change (MoEF & CC) on 28th June 2017, accordingly Goa-SEAC during its 84th meeting held on 7th September 2017 decided to inspect the proposed site , accordingly committee inspected the site on 11th October 2017 based on inspection held on 11th October 2017 and subsequent presentation Committee sought compliance with regard to following:

- a. Project Proponent has to submit provision for construction and demolition waste along with detailed Debris Management plan.
- b. PP has to submit revised parking plan along with movement of vehicles.
- c. PP has to submit landscape plan with cross section showing movement of vehicles.
- d. PP has to provide appropriate budgetary outlay towards CSRI (*Corporate Social responsibility Initiative*) in consultation with Goa waste Management Cell.
- e. Clarification on the budgetary provision for environmental management plan, especially the operation and maintenance of the Sewage Treatment Plant.

2. Representative of 'J.M. Environet Pvt. Ltd made the project-specific presentation on behalf of PP w.r.t. project proposal seeking environmental clearance (EC) for Proposed Group Housing and Commercial Project “**MANGLAM CASA AMORA**” At Survey No. 20/3-A, Village Bainguinim, Taluka Tiswadi, North Goa, Goa. Brief extract of the project details submitted by Project Proponent is as below:

Sr. No.	Description	Details
1	Name of the project Proponent	Applicant Company - Manglam Build Developer Ltd. Authorised Signatory - Mr. Sanjay Gupta
2	Address for Communication	Mr. Sanjay Gupta Manglam Build Developer Ltd. Behind Hotel Fern Kadamba Old Goa bypass Highway, Kadamba Bainguinim village, Old Goa 403402 Mo no 9011098657 Email- skg.casaamora@gmail.com
3	Name & location of the project	Revised Proposal of Proposed Group Housing and Commercial Project “ MANGLAM CASA AMORA ” At Survey No. 20/3-A, Village Bainguinim, Taluka Tiswadi, North Goa, Goa
4	Plot Area	32893 Sq.m (8.13 Acres)
5	Net plot Area	29,889 Sq.m (7.39 Acres)
6	FSI Area Non-FSI Area Total construction Area Building configuration & Height of the building	FSI Area =Permissible: 26314.40 sq.m., Proposed: 22946.46 sq.m. Non-FSI Area = 15932.84 sq.m. Total construction Area/Built-up area = 38879.30 sq.m. Building configuration Residential and Commercial = Resi. 2 BHK – 288, 1.5 BHK – 76, Shops – 8, Club house – 1 with swimming pool. Height of the building : 14.35 meters including stilt height
7	No. of shops	8 Nos.
8	Total water requirement (Construction/operation phase)	Total water requirement operation phase = 303 KLD (Fresh Water 172 KLD + Treated Water 131 KLD) Construction Water Phase = 30 - 40 KLD
9	Sewage generation	218 KLD
10	STP Capacity / Proposed Technology	STP Capacity = 190 KL (We are proposing 190 KL capacity STP, due to less occupancy scenario in Goa) Proposed Technology = SMMBR
11	Total Solid Waste Quantities	867 kg/day
13	Energy Efficiency	Total savings in percentage 35.70 %
14	Parking 4 W and 2W	385 (4 W) AND 200 (2-W)
15	Power requirement	Total Power Requirement: 2714 KW, Source: Goa Electricity Board (GEB)
16	D.G set Capacity	Total 2 Nos. of DG Sets, having total capacity 325 KVA (1X200 KVA + 1 X 125 KVA)
17	RWH tank capacity	220 m3/hr

18	EMP cost (including DMP cost)	During Construction: Capital cost: 35.00 Lac & Recurring Cost: 12.50 Lac During Operation Phase: Capital cost: 101.00 Lac & Recurring Cost: 21.50 Lac
19	No. of trees on site	In Phase-III-24 Trees In Preservation area-20 Trees
20	No. of trees to be cut	2 Nos. of trees may be cut from Phase-III
21	No. of trees to be planted on site	250 Trees / Plants.
22	CRZ status	Not Applicable

However, based on inspection held earlier on 16th November 2017 and following re-inspection dated 25th November 2017 and subsequent presentation Committee sought compliance with regard to following:

- a. PP has to give undertaking whether there is any land encroachment or common boundary with Goa waste management cell for proposed municipal solid waste treatment proposed at Baingunim. Accordingly PP has to give “NO OBJECTION” and consent if any query raises during public consultation will be taken into account.
- b. PP has to resubmit proposed water calculation /water requirement.
- c. PP has to submit revised parking plan along with movement of vehicle.
- d. PP has to provide additional appropriate budgetary outlay towards CSRI (*Corporate Social responsibility Initiative*) in consultation with Goa waste Management Cell.
- e. PP has to submit No Objection Certificate (NOC) from Goa State Archives & Archaeological Department with respect to the Kadamba wall which is historic monument which is adjacent to the said project .

3. Representative of *M/s Sadekar Enviro Engineers Pvt. Ltd* on behalf of **Mario Fernandes** for proposed construction of Hotel buildings in the property bearing S.Y No. 280/11-A and 280/18 of Calangute , Bardez, Goa . Brief extract of the project details submitted by Project Proponent is as below:

Sr.No.	Description	Details	
1	Name & location of the project	Mario Fernandes and Co. Survey.no. 280/11-A & 280/18 of Calangute Village, Bardez Taluka, North Goa District, Goa Latitude: 15°33'47.73"N Longitude: 73°45'5.52"E	
2	Plot Area	4100 sq.m	
3	Net plot Area	4100 sq.m	
4	FSI Area	FSI Area:	1348.88 sq.m
	Non-FSI Area	Non-FSI	2496.11 sq.m
	Total construction area	Area:	

	Building configuration & Height of the building	Total construction area:	3844.99 sq.m		
	Building configuration & Height of the building:	Amenities	Description	No. Of Floors	
		Block - A	8 nos. of rooms	Ground Floor + First Floor	
		Block - B	4 nos. of rooms	Ground Floor + First Floor	
		Block - C	4 nos. of rooms	Ground Floor + First Floor	
		Block - D	17 nos. of rooms	Ground Floor + First Floor+ Basement	
		Block - E	10 nos. of rooms	Ground Floor + First Floor	
5	No. of shops	Nil			
6	Total water requirement(Construction/operation phase)	Construction Phase: 30 KLD Operation Phase: 21 KLD			
7	Sewage generation	Construction Phase: 2.7 KLD Operation Phase: 19 KLD			
8	STP Capacity	20 KLD			
9	Total Solid Waste Quantities	Construction Phase: 15 Kg/day Operation Phase: 58.5 Kg/day			
10	RG Area	900 sq.m			
11	No. of trees	70 nos.			
12	Energy Efficiency	Proposed to comply ECBC norms and use non-conventional Energy (Solar power for Common area lighting) and Water Heating			
13	Parking 4 W and 2W	49 nos. car parking			
14	Power requirement	Construction Phase: 22.5 KVA Operation Phase: 400 KVA			
15	D.G set Capacity	250 KVA x 2 nos.			
16	RWH tank capacity	18m ³			
17	EMP cost (including DMP cost)	Capital Cost: Rs. 18,53,410.00 Recurring cost: Rs. 7,96,000.00			
18	No. of trees to be cut	Nil			

19	No. of trees to be planted on site	50
23	CRZ status	The proposed project site falls under CRZ III within 200 mtrs to 500 mtrs from HTL. The project is a regulated permissible activity as per Clause 8 (III) B (i) of CRZ notification 2011.

However, based on inspection held earlier on 16th December 2017 and subsequent presentation Committee decided to recommend the said project proposal for CRZ Clearance following Specific conditions:

- i. 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.
- ii. 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.
- iii. PP has to provide additional system for flushing.
- iv. PP needs to comply with the provision of construction and demolition of waste management rules 2016 laid down by Ministry of Environment & Forest & Climate change (MOEF & CC).
- v. 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.
- vi. PP needs to ensure that no treated water or any waste sewage shall be discharged into any water body. STP of suitable capacity shall be installed considering the quantity / quality of waste water generation.
- vii. E-waste shall be disposed through Authorised vendor as per E-waste (*Management and Handling*) Rules, 2011.
- viii. The Project Proponent shall utilise fly ash bricks in masonry works.
- ix. The PP shall use construction debris for land filling wherever applicable.

- x. 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.
- xi. 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.
- xii. 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.
- xiii. 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.
- xiv. The PP should install an online monitoring system to check water quality of treated water from the STP in consultation with Goa State Pollution Control Board (GSPB).
- xv. 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.
- xvi. 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.
- xvii. PP shall make provision for charging points for electronic vehicles in the parking area.
- xviii. 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 '107' 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.

1. Representative of *M/s Sadekar Enviro Engineers Pvt. Ltd* on behalf of Elliot Goa resort Pvt Ltd for proposed construction of Hotel buildings in the property bearing S.Y No. 277 (Sub-division no. 2, 4, 5, 15 to 18, 22, 24 to 52), 278 (sub-division no. 1 to 29) & 279 (sub-division no. 42, 43) of Calangute , Bardez, Goa by Elliot Goa resort Pvt Ltd. Goa. Brief extract of the project details submitted by Project Proponent is as below:

Sr.No.	Description	Details
1	Name & location of the project	Elliot Goa Resorts Pvt. Ltd. Survey No. 277 (Sub-division no. 2, 4, 5, 15 to 18, 22, 24 to 52), 278(sub-division no. 1 to 29) & 279(sub-division no. 42, 43) Calangute Village, Bardez Taluka, North Goa. Latitude : 15°33'50.28"N Longitude : 73°45'4.22"E
2	Plot Area	Plot A: 16095 Sq.m Plot B: 10776 Sq.m
3	Net plot Area	Plot A: 15180 Sq.m Plot B: 10261 Sq.m

4			Plot A	Plot B
		FSI Area	5305.6 Sq.m	1899.80 Sq.m
		Non-FSI Area	9757.44	3305.70 Sq.m
		Total construction Area	15063.04 Sq.m	5205.5 Sq.m
5	No. of shops	Nil		
6	Total water requirement(Construction/operation phase)	Construction Phase: 30 KLD Operation Phase: 51 KLD		
7	Sewage generation	Construction Phase: 2.7 KLD Operation Phase: 46 KLD		
8	STP Capacity	Plot A STP capacity: 30KLD Plot B STP capacity: 20 KLD		
9	Total Solid Waste Quantities	Construction Phase: 15 Kg/day Operation Phase: 140 Kg/day		
10	Green belt area	Plot A - 4218 Sq.m Plot B - 6729 Sq.m		
11	No. of trees	13 nos.		
12	Energy Efficiency	Proposed to comply ECBC norms and use non-conventional Energy (Solar power for Common area lighting) and Water Heating		
13	Parking 4 W and 2W	Plot A: 208 nos. of car parking Plot B: 47 nos. of car parking		
14	Power requirement	Construction Phase: 50 KVA Operation Phase: 475 KVA		
15	D.G set Capacity	380 KVA x 2 nos.		
16	RWH tank capacity	Plot A- 100m ³ Plot B- 100m ³		
17	EMP cost (including DMP cost)	Capital cost: Rs. 18,53,410 Recurring cost: Rs. 7,96,000		
18	No. of trees to be cut	Nil		
19	No. of trees to be planted on site	50		
23	CRZ status	The proposed project site falls under CRZ III within 200 mtrs to 500 mtrs from HTL. The project is a regulated permissible activity as per Clause 8 (III) B (i) of CRZ notification 2011.		

However, based on inspection held earlier on 16th December 2017 and subsequent presentation Committee decided to recommend the said project proposal for CRZ Clearance following Specific conditions:

- i. 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.
- ii. 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.
- iii. PP has to provide additional system for flushing.
- iv. PP needs to comply with the provision of construction and demolition of waste management rules 2016 laid down by Ministry of Environment & Forest & Climate change (MOEF & CC).
- v. 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.
- vi. PP needs to ensure that no treated water or any waste sewage shall be discharged into any water body. STP of suitable capacity shall be installed considering the quantity / quality of waste water generation.
- vii. E-waste shall be disposed through Authorised vendor as per E-waste (*Management and Handling*) Rules, 2011.
- viii. The Project Proponent shall utilise fly ash bricks in masonry works.
- ix. The PP shall use construction debris for land filling wherever applicable.
- x. 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.
- xi. 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.

- xii. 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.
- xiii. 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.
- xiv. The PP should install an online monitoring system to check water quality of treated water from the STP in consultation with Goa State Pollution Control Board (GSPB).
- xv. 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.
- xvi. 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.
- xvii. PP shall make provision for charging points for electronic vehicles in the parking area.
- xviii. 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 '107' 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.

Shri. Dominic Fernandes _____ *Sd/-* _____

Dr. Purushotam Pednekar _____ *Sd/-* _____

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

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

Place: Patto, Panaji
Date: March 2018

ANNEXURE – I

List of members who attended the 92nd Goa –SEAC meeting held on 15th March 2018

1. Shri. Suhas Godse, Taleigao - *Chairman (Goa-SEAC)*
2. Shri. Dominic Fernandes , Panaji - *Member (Goa-SEAC)*
3. Dr. Purushotam Pednekar, Mapusa - *Member (Goa-SEAC)*
4. Shri. Sanjeev Joglekar, Panaji - *Secretary (Goa-SEAC)*