# Agenda Item for the First Goa-SEAC meeting held on 24<sup>th</sup> January 2011

#### 1. CRICKET STADIUM AT THIVIM BY GOA CRICKET ASSOCIATION

Sr. No.	Project Proponent	Proposed Activity	Site-specific location details	Project details / specification / salient features (extracted from the project details submitted)	Comments from Goa-SEAC members	Response to comments by Project Proponent (PP) as on 20 <sup>th</sup> January 2011
1	Goa Cricket Association – GCA  Mr. Vijaykumar Sawant, Rizvi Sadan, 2 <sup>nd</sup> Floor, Near Municipal Market, Panaji, Goa – 403 001.  goacricketassociation@rediffmail.com  Phone – 2421088 Fax - 2420455	Cricket Stadium	32 acres of land in Acoi village near Thivim, Bardez taluka	Total plot area – 1,30,328 sq. mt. (32 acres) Total built-up area – 45,087.59 sq. mt. (35%) Proposed ground coverage – 32,183 sq. mt. (22%) Total parking area – 24,911 sq. mts. Total green area – 1,00,352.56 sq. mt.(77%)  Estimated cost – 160 crores  Seating capacity – 46, 575 seats  Total parking (open and enclosed) – 668 cars, 198 two-wheelers  Water requirement – 1221 KLD – during Games 493 KLD – during normal days  Total waste-water generated – 1050 KLD to be treated using 1260 KLD Sewage Treatment Plant (STP) on SAFF (Submerged Aerated Fixed Film) technology which will generate 840 KLD of treated water to be used for flushing and landscape.  Rainwater Harvesting (RWH) initiatives – (1) 32 rainwater harvesting pits are proposed for artificial rainwater recharge. (2) Desilting tanks and Recharge wells are proposed – LOCATION NOT DEFINED  Power requirement – 3223 KVA to be sourced through Goa Electricity Department	<ol> <li>It is informed that the matter pertaining the "issuance of approval for diversion of forest land" to the Directorate of Sports and Youth Affairs granted under the Forest (Conservation) act, 1980 has been stayed by the Ministry of Environment &amp; Forests (MoEF) pursuant to Writ Petition No. 321/2010 and PIL W. P. No. 14/2010 filed in the Hon'ble High Court of Goa at Bombay by M/s Goa Foundation.</li> <li>The possibility of widening the State Highway – the only approach road to the proposed project site be taken on priority so as not to disturb daily vehicular movement. Further, an alternate exit-road / secondary road need to be constructed along the northeast periphery of the plot boundary to minimize traffic congestion.</li> <li>Geotechnical soil analysis may please be carried out to ascertain the soil characteristics as well as groundwater status and its recharge potential. It is not advisable to opt for recharging of groundwater through recharge-pits, instead make a provision for</li> </ol>	The PP is yet to comply with comments against sr. nos. 1, 2 4 & 6.  The PP has submitted the compliance to comments against sr. nos. 3 & 5. (refer Annexure 'A' colly)
				(GED). During emergency, proposed to be backed up with 3 DG sets of 1250 KVA each.	optimum utilization/storage of rainwater to be used in fair-	

	Solid waste generated – 6835 kg./day (during games)  - 963 kg/day (during normal days)  weather season.  4. Location-specific details of the proposed bore well as well as 32 numbers of rainwater harvesting pits, superimposed on the contour
	map of the proposed plot area, be furnished.  5. PP should make a provision for exclusive fire-escape routes / staircase to avoid stampede during such eventualities. The PP
	should submit 'Stability' as well as 'Fire Safety' Certificates as per the conceptual plan proposed.  6. It is advisable to construct composting pits within the project
	site to treat the biodegradable waste – bio-composting technique and utilize the manure to maintain the green-field area.

 $<sup>\</sup>hbox{*} \ Kindly \ refer \ recommendations \ of the \ Goa-SEAC \ members$ 

# 2. HOSPITAL-cum-HOTEL AT TALEIGAO BY M/s ALCON CONSTRUCTIONS (GOA) PVT. LTD.,

Sr. No.	Project Proponent	Proposed Activity	Site-specific location details	Project details / specification / salient features (extracted from the project details submitted)	Comments from Goa-SEAC members	Response to comments by Project Proponent (PP) as on 20 <sup>th</sup> January 2011
2	M/s Alcon Constructions (Goa) Pvt. Ltd.,  Mr. Nanda Sadassiva Naique Counto, Director, Sukerkar Mansion, 1st Floor, M. G. Road, Panaji, Goa – 403 001  e-mail – aakaash@bsnl.in  Ph 2224451 / 2224452 Fax – 2225616  Registered address – M/s Alcon Constructions (Goa) Pvt. Ltd., Velho Bldg., 1st Floor, Panaji.	250-bedded Hospital-cum- Hotel (42 rooms)  G + 5 upper floors and 1 basement	Taleigao village, Tiswadi taluka, S. Nos. 112/1, 112/1(part) – 11,988.67 sq. mt.  Next to Sewage Treatment Plant at Taleigao	Total plot area – 11,988.67 sq. mt. (effective – 10,245.53 sq. mt.)  Total built-up area – 27,958.90 sq. mt. (upto 5th floor)  Proposed open space – 1,542.38 sq. mt. (15.05%)  Proposed ground coverage – 3,618 sq. mt. (35.32%)  Proposed FAR – 21,837.64 sq. mt.  About 30,393 m³ of earth would be removed / excavated.  Raft foundation is proposed with safe bearing capacity of 10 T/sq.mt.  Heating Ventilation Air Conditioning (HVAC) system is proposed.  Internal road with 10 mt. width and parking space proposed for 420 nos. (details not mentioned)  Intermediate STP with Moving Bed Bio-Reactor (MBBR) technology is proposed – part treated sewage to transfer to authorized STP to St.inez – total treated sewage is 235 cmd, 209 cmd to be reuded for gardening, flushing, AC-cooling. 26 cmd to disposed into sewers.  Well-engineered storm-water drainage system is proposed.	<ol> <li>The proposed land was used to be a landfill site earlier and as such almost 5 to 6 mts of top soil is organic-rich fertile and should be utilized for landscaping development.</li> <li>The PP must ensure that the effluents / waste water in the adjoining St.Inez nala should not infiltrate within the project site and contaminate the groundwater quality as E. Coli concentration and FE content is reported to be higher in the bore-well water. Accordingly, PP should treat the nala on priority as well as construct approach road to the proposed site.</li> <li>The proposed site, being very low-lying area, bears a sandy aquifer regime and as such, built individual sump rather than soak pits to treat waste-water effectively.</li> </ol>	The PP needs to comply with all the comments

Water requirement – 9 cmd (Construction) 452 cmd (operation)	
Contd. / - Total waste-water generated – 1.6 (Construction) 247 cmd (Operation)	
60 trees are proposed to be planted.	
Power requirement – 25 KW (Construction)  - 780 KW (Operation)  Back-up power through diesel generator of 750 KVA.	
Solid waste generated – 1 – 3 MT/d (Construction) Operation phase - 63 kg/d – Biomedical and 570 kg.d – domestic waste.	
Organic Waste Convertor (OWC) is proposed for biodegradable waste.	
EMP enclosed as annexure – VII.	

<sup>\*</sup> Kindly refer recommendations of the Goa-SEAC members

# 3. RESIDENTIAL COMPLEX AT ALTO-BATIM BY ROCKFIRST REAL ESTATE LTD.,

Sr. No.	Project Proponent	Proposed Activity	Site-specific location details	Project details / specification / salient features (extracted from the project details submitted)	Comments from Goa-SEAC members	Response to comments by Project Proponent (PP) as on 20 <sup>th</sup> January 2011
3	M/s Rockfirst Real Estate Ltd., Mumbai.  Mr. Rajesh Jaggi, Managing Director, 1, Peninsula Spenta, Mathurdas Mills, Senapati Bapat Marg, Lower Parel, Mumbai – 400013  Ph. – 022/66229400 – 022/66229300/01  Fax – 022/66229302  rajeshjaggi@Peninsula.co.in (M) - 9820505005  Corres. Add.:  Mr. Sanjeev - 9890003168  Peninsula Land Ltd., Peninsula Center, H. No. 850, Opp. SBI, Porvorim – 403 621  Mr. Sanjay Ghatwal (M) - 9764005561	Residential Apartments  "Ashoka Beleza" (G + 3 storied complex)	Alto-Betim village, Bardez taluka, S. Nos. 57/1 of Reis Magos village	Total plot area – 29,120.13 sq. mt. Total Ground coverage area – 8,751 sq. mts. Green cover area – 20,368 sq. mts. Built-up area – 22,279.67 sq. mts. Total construction built-up area – 32,452.52 sq. mts.  Ready-Mix-Concrete (RMC) to be used.  Total occupancy – 652 nos. (max.)  About 80,134 m³ of earth would be removed / excavated.  Geotechnical soil investigation (enclosure – 1) as carried out through 17 boreholes with permanent benchmark of +50mt. No groundwater table was encountered.  Reinforced concrete (i.e. Spread foundation) is proposed with maximum water: cement ratio of 0.50 at an average depth of 1.5 mt This foundation has a safe bearing capacity of 40 T/sq.mt. (with total settlement of 9 mm). California Bearing Ratio (CBR) of 6 is proposed for construction design. Retaining walls with weep holes with gravel filters are proposed.  Estimated cost – 125 crores.  Noise pollution to be controlled by restricting the usage of equipments generating more than 90 db (A) sound.	<ol> <li>The proposed project "A" appears to be an extension of the ongoing work, being developed, within two adjacent plots namely – 'B' and 'C' and is seeking prior Environmental Clearance (EC) from the Goa-SEIAA, as the built-up area, taken together, exceeds 20,000 sq. mts. as per the EIA Notification, 2006.</li> <li>Almost 30% of the total plot area has been developed and as a result, appreciable proportion of naturally grown vegetation has been lost along the hill-slopes.</li> <li>It is advisable to re-design the rainwater-storage tanks proposed in the already developed area (i.e. B &amp; C portion) so as to account for suitable water storage, as one of the rainwater harvesting measures.</li> <li>The PP, during the presentation has ensured that as a matter of Corporate Social Responsibility (CSR), it would set-up sufficient numbers of composting units in Reis-Magos village to treat and dispose-off biodegradable waste.</li> </ol>	The PP needs to comply with all the comments

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	Water requirement – During construction : $42 \text{ m}^3/\text{d}$ $12\text{m}^3/\text{d}$ for workers from local authority $20 \text{ to } 30 \text{ m}^3/\text{d}$ for construction through tankers.	
	During operation: 60m³/d for domestic use (150 m³/d) 30m³/d for flushing 60m³/d for gardening	
	50 trees are proposed to be planted in lieu of 46 trees for which permission is sought.	
	Power requirement – 75 kVA (Construction) - from Goa Electricity Dept. 3828 KW (from GED) during Operation. Back-up power through four diesel generator 2 nos. of 750 kVA and 2 nos. of 500 kVA.	
	Solid waste generated – 291 kg/d – (Dry garbage – 89 kg. & Wet garbage – 203 kg. / d)  Vessel composting is proposed to manage wet garbage (i.e. biodegradable). STP using Moving Bed Bio Reactor (MBBR) technology is proposed to be provided. (Technical details of the proposed STP may please be furnished). Dry sludge to be used as manure for plants.	
	RWH is proposed.	
	EMP for HW management is enclosed as Enclosure – 3.	
	Disaster Management Plan enclosed as Enclosure - 4	

<sup>\*</sup> Kindly refer recommendations of the Goa-SEAC members

# 4. RESIDENTIAL COMPLEX AT SOCCORRO BY M/s NITIN DEVELOPERS PVT LTD.,

Sr. No.	Project Proponent	Proposed Activity	Site-specific location details	Project details / specification / salient features (extracted from the project details submitted)	Comments from Goa-SEAC members	Response to comments by Project Proponent (PP) as on 20 <sup>th</sup> January 2011
4	Nitin Developres Pvt. Ltd., Mr. Nitin Saraf, La Casa Grande, Lane No.2, St. Mary's Colony, Miramar  Architect - C/o Soares & Associates, G-1, Vikas Bldg., 18 <sup>th</sup> June Rd., Next to Pharmacy College, 18 <sup>th</sup> June Road, Panaji, Goa – 403 001  Ph. – 2228040 / 2430010 / 2463365 Mobile - 9326142082	Residential complex	Soccorro village, Bardez taluka, S. Nos. 402/2, 404/5 and 402/2-C	Total plot area – 22,896.38 sq. mts.  FAR (permissible) – 18,317.10 sq. mts.   (proposed) – 17,072.69 sq. mts.  Coverage (permissible) – 9,124.15 sq. mts.   (proposed) – 7,048.11 sq. mts.  Total parking provide for 275 cars  Total occupancy (optimum) – 746 persons  Water requirement – About 125 m³ per day (sump of 1,00,000 liters capacity is proposed) to be tapped from P.W.D.  Total waste-water generated – 98,000 liters per day STP is to be provided with generation of sewage sludge of 1.5 m³ per day - Part of this is proposed to be recirculated and part to be disposed-off to STP through transport trucks.  Total solid waste generated – 500 kgs. per day (max.)  RWH is proposed for both, as storage (02 tanks) as well as groundwater recharge (02 pits) . And to be integrated with stormwater drainage. Wells existing on site to be used for plantations and would be recharged.  Power requirement – Not provided. However, CFL to be utilized. Solar energy for garden lights and water heating system proposed.	<ol> <li>The PP is seeking prior EC from the Goa-SEIAA for the extension of the ongoing construction / development as the built-up area, with the proposed extension, exceeds 20,000 sq. mts. as per the EIA Notification, 2006.</li> <li>Almost 40% of the total plot area has been developed and as a result, appreciable proportion of naturally grown vegetation has been lost along the moderate to steep sloping hill-slopes thereby disturbing the natural drainage, green cover.</li> <li>The proposed extension would further degrade the ecological set-up of the area as the proposed construction-activity would invariably require cutting of trees (loss of green cover) hill-slope cutting (slope instability and disturbance to natural drainage).</li> <li>There exists a nala along the northern boundary of the plot boundary which may get affected / flooded / silted / diverted during monsoon owing to large-scale storm-water movement / soil erosion.</li> </ol>	The PP needs to comply with all the comments

#### \* Kindly refer recommendations of the Goa-SEAC members

#### Salient features of Category "B" Project proposals received seeking prior Environmental Clearance (EC) under EIA Notification, 2006

### 5. RESIDENTIAL-cum-COOMERCIAL COMPLEX AT KHORLIM BY BUILDMORE INFRASTRUCTURE INDIA PVT LTD.,

Sr. No.	Project Proponent	Proposed Activity	Site-specific location details	Project details / specification / salient features (extracted from the project details submitted)	Comments from Goa-SEAC members	Response to comments by Project Proponent (PP) as on 20 <sup>th</sup> January 2011
5	Buildmore Infrastructure India Pvt. Ltd., Mr. Jerry Braganza, Souza Towers, 2 <sup>nd</sup> Floor, Near Municipal Garden, Panaji, Goa – 403 001  Ph. – 2426662 Fax – 2431973  e-mail – info@bminfraindia@vsnl.com  Address as given on the letter head - A/6, Skylark Apartments, Menezes Braganza Road, Panaji, Goa – 403 001	Residential building-cum-commercial complex  (Basement + ground floor + 7 upper floors – 152 flats)	Khorlim village, Bardez taluka, S. Nos. 5/1 and 5/2 of P. T. Sheet no. 144	Total plot area – 9,416 sq. mt. Total built-up area – 27,267.49 sq. mt. Proposed open space – 1521 sq. mt. ( more than 15%) Proposed coverage – 3185 sq. mt. (less than 40%) FAR consumed – 18,826 sq. mt. Expected total occupancy – 1509 (combined)  Geotechnical soil investigation as carried out through 03 boreholes (max. depth – 12 mt.). Groundwater is encountered at about 2.5 mt. below ground level.  About 16,000 m³ of earth would be removed / excavated.  Spread foundation is proposed at an average depth of 1.5 mt. – 2.5 mt. with a net allowable bearing capacity of 17 to 35T/sq.mt. (with max. settlement between 30 mm – 70 mm.).  Alternatively, Raft foundation is proposed at 1.5 mt. depth with net allowable bearing capacity of 12T/sq. mt.  Heating Ventilation Air Conditioning (HVAC) system is proposed.  Water requirement – During Construction phase - 9 cmd (2 for domestic use and 7 for construction purpose)  - During operational phase - 147 cmd (79.6 through PWD supply, 67.4 through recycled water)	1. The PP should opt for additional provision towards storage of optimum quantity of rainwater to be utilized during fair-weather season, considering the post-project usage of water.  2. The bore well drilled to carry out geotechnical soil investigation be recharged suitably and be utilized in case of need-based urgency.	The PP needs to comply with all the comments.

	Total waste-water generated – 122 cmd. From which 117 cmd is expected to be generated as treated water. STP of treating capacity of 130 cmd based on Moving Bed Bio-Reactor (MBBR) technology is proposed – Treated water (about 67.4 cmd) to be utilized for landscaping and flushing and remaining (49.8 cmd) to be discharged into municipal sewer. STP would generate about 5 kg./day of sludge.  Storm water drain and RWH –  Power requirement (to be sourced from Goa Electricity Dept.) – Construction phase – 200 kVA Operation phase – 5 kVA  Back-up power through DG sets of 250 kVA capacity  Solid waste generated – 1 – 3 MT./day (Construction) 491 kg/day (on Operation) Organic Waste Convertor (OWC) is
	Organic Waste Convertor (OWC) is proposed for biodegradable waste.  EMP enclosed as Annexure – V

<sup>\*</sup> Kindly refer recommendations of the Goa-SEAC members

# 6. PREMIUM HOUSING AND COMMERCIAL DEVELOPMENT BY GERA DEVELOPMNETS PVT. LTD., PUNE

Sr. No.	Project Proponent	Proposed Activity	Site-specific location details	Project details / specification / salient features (extracted from the project details submitted)	Comments from Goa-SEAC members	Response to comments by Project Proponent (PP) as on 20 <sup>th</sup> January 2011
6	Gera Developments Pvt. Ltd., 200, Gear Plaza, Boat Club Rd., Pune – 411001  Ph. 020-26125580 / 81 Fax. 020 – 26113653  E-mail – info@gera.in Website - www.gera.in  Ms. Sunaina Gera Vice-President – Product Development & Design	Premium housing (G + 1) and commercial development  Five parts – 1.Garden Preserve 2.Water Preserve 3.Village Preserve 4.Town Center 5.Sky Preserve	Survey no. 33 of village Khandola, Ponda taluka, North Goa.  Total Plot area – 1,21,383.27 sq. mts.	Total / Net plot area — 1,21,383.27 sq. mts. (no area under road widening) Proposed open space — 41,949.52 sq. mts. Proposed coverage — 22,497.16 sq. mts. (18.53%) FAR consumed — 0.69% (permissible is 0.80%) Permissible FSI — 97,106.62 sq. mts. (80%) Expected total occupancy — About 750 (Annexure — IV) Parking provide for 1013 vehicles.  Out of 414 trees existing on site and project proposes to maintain the maximum number.  Geotechnical investigation was carried out by College of Engineering, Pune and the inference wad made through 16 boreholes (max. depth — 10 mt.). No Groundwater is encountered upto the depth of 10 mts. Below GL.  Isolated type of foundation is proposed at an average depth of 2.5 mt. below GL with a net allowable bearing capacity of 27 T/sq.mt. (with max. settlement upto 25 mm).  Water requirement — During Construction phase — 50 cmd (5 cmd for domestic use and 45 cmd for construction purpose)  — During operational phase — 212 cmd (90 cmd through PWD supply, 122 cmd through recycled water)	<ol> <li>The PP proposes to develop the project site in three phases (Phase – I, II and III). However, currently seeking prior Environmental Clearance (EC) for constructional activity for Phase-I and II as combined. Phase-III is proposed to be developed later in light of the amendment to be made in the permissible FAR, to be considered by the TCP.</li> <li>The PP although, has submitted the 'Sanad', however, it needs to submit the sale deed / power of attorney indicating the ownership status of the said plot area.</li> <li>Geotechnical report (Annexure – III) enclosed with the proposal does not mention about (a) bore hole location and (b) soil profile. As such, it needs to be re-submitted, preferably superimposed on suitable contour map of the proposed plot area.</li> <li>Contour map of the area provided is not to a suitable scale in light of the effective gradient and contour interval</li> </ol>	The PP needs to comply with all the comments.

Total waste-water generated – about 4 cmd during construction plase.  STP of treating capacity of 130 cmd based with SAFF technology is proposed – Treated water (about 122 cmd) to be utilized for landscaping and flushing. Dual plumbing system is proposed for PMD water supply and use of freated wastewater.  The project proponent proposes RWH for effective recharge of GW through construction of –  1. Pond with recharge bore of 45,000 liters capacity (Zone C) and 66,000 liters for Zone F.  Power requirement (to be sourced from Goa Electricity Dept.) – Construction phase – 50 RW Operation phase – 2037 KVA  Energy efficient electrical and Heating Vennlation Air Conditioning (RVAC) system is proposed towards energy conservation.  Back-up power through two DG sets of 40 KVA and 82.5 KVA capacities.  Solid waste generated – 1 – 3 MT./day (construction) 1468 kg/day (on Operation ) to be vermicompost ed. About 10 kg/day sludge generated from STP is to be composted on-site.	through the proposed site.		
Power requirement (to be sourced from Goa Electricity Dept.) – Construction phase – 50 KW Operation phase – 2037 KVA  Energy efficient electrical and Heating Ventilation Air Conditioning (HVAC) system is proposed towards energy conservation.  Back-up power through two DG sets of 40 KVA and 82.5 KVA capacities.  Solid waste generated – 1 – 3 MT./day (construction) 1468 kg/day (on Operation) – to be vermicompost ed. About 10 kg/day sludge generated from	during construction phase.  STP of treating capacity of 130 cmd based with SAFF technology is proposed – Treated water (about 122 cmd) to be utilized for landscaping and flushing. Dual plumbing system is proposed for PWD water supply and use of treated wastewater.  The project proponent proposes RWH for effective recharge of GW through construction of –  1. Pond with recharge bore of 45,000 liters capacity  2. Tank of 70,000 liters capacity (Zone C) and 66,000 liters for	during the operation phase needs to be indicated along with the modus operandi to treat / dispose-off the same.  6. The PP should opt for additional provision towards storage of optimum quantity of rainwater to be utilized during fair-weather season, considering the post-project usage of water. Accordingly, PP should indicate the site-specific locations of storage tanks, recharge pond, existing water body, as applicable, without affecting the natural	
Back-up power through two DG sets of 40 KVA and 82.5 KVA capacities.  Solid waste generated – 1 – 3 MT./day (construction) 1468 kg/day (on Operation) – to be vermicompost ed. About 10 kg/day sludge generated from	Zone F.  Power requirement (to be sourced from Goa Electricity Dept.) – Construction phase – 50 KW Operation phase – 2037 KVA  Energy efficient electrical and Heating Ventilation Air Conditioning (HVAC) system is proposed towards energy		
	Back-up power through two DG sets of 40 KVA and 82.5 KVA capacities.  Solid waste generated – 1 – 3 MT./day (construction) 1468 kg/day (on Operation) – to be vermicompost ed. About 10 kg/day sludge generated from		

# 7. RESIDENTIAL COMPLEX BY M/s K. RAHEJA UNIVERSAL PVT. LTD., MUMBAI

Sr. No.	Project Proponent	Proposed Activity	Site-specific location details	Project details / specification / salient features (extracted from the project details submitted)	Comments from Goa-SEAC members	Response to comments by Project Proponent (PP) as on 20 <sup>th</sup> January 2011
7	M/s K. Raheja Universal Pvt. Ltd., Raheja Centre–Point 294, C.S.T. Road, Near Mumbai University, Off Bandra-Kurla Complex, Santacruz (E) – Mumbai – 400 098  Ph. 022-66414137/38 Fax – 022-66414242  Mr. Yogesh Yadav, Asst. Manager (M) – 9850467028 yogesh.yadav@rahejauniversal.com	Residential project – Raheja Chrysalis (including provision for commercial shops)	Survey Nos. 64/1 and 67/1 of Carmona village, Salcete taluka, South Goa.  Total Plot area – 88,868 sq. mts.  Built-up area – 87,250 sq. mts. (excluding road widening of 1,618 sq. mts.)	Net plot area – 88,868 sq. mts.  Effective plot area – 87,250 sq. mts.  Built-up area – 35, 629 sq. mts.  Total construction area – 57,006 sq. mts.  Proposed open space – 47,478 sq. mts.  (about 54%)  Expected total occupancy – About 262 + 511 persons from commercial shops (refer sr. no. 4.2. on pg. 13 and sr. no. 8.4 on pg. 22)  Parking provided for 25 ECS on surface (i.e. open parking) and 35 ECS in garage (i.e. covered parking).  The proposed plot has a maximum elevation difference of 6 mts. (refer 1.1 in Form-1A) with no natural watercourse passing through the site. Groundwater is encountered at a depth of 3 – 5 mts.  Excavation will be carried out for foundation of buildings and one basement.  Water requirement – 268 m³ (216 – fresh water & 52 recycled water) per day to be sourced through municipal supply. (provisional NOC has been issued by PWD, Margao)  Total waste-water generated – about 58 m³ per day which is proposed to be transferred to STP of 65 KLD capacity (output is expected to be 52 KLD – 28 KLD for flushing and 24 KLD for green area) to be	<ol> <li>NE portion of the proposed plot area has been classified as No Development Area (NDZ) and as such, top soil excavated from the remaining plot, during construction, be utilized for proposed landscape development (i.e. landscaping) within the NDZ area.</li> <li>The PP should submit the geotechnical soil analysis report so as to understand the soil profile &amp; its characteristics, foundation details, hydrogeological status.</li> <li>It is advisable that the water / power requirement, generation of optimum solid waste / sewage / waste water as well as methodology to be adopted to treat/dispose-off be indicated separately as (a) during construction, including excavation debris, if any and (b) on operationalization of the project.</li> <li>The PP should submit the details of the Sewage Treatment Plant (STP) proposed to be installed along with the methodology to be adopted to teat wet garbage on-site</li> </ol>	The PP has complied with all the comments except sr. no. 3 (refer Annexure 'B' colly)

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	installed on -site. Dual plumbing system is		
	proposed for PWD water supply and use of		
	treated waste-water. Sludge to be used as	5. Total waste-water generation	
	manure for green area development.	during the operation phase needs	
		to be indicated along with the	
	Solid waste generated – 213 kg. / day	modus operandi to treat /	
	(Construction)	dispose-off the same.	
	(on Operation) - 105  kg./ day  + 108	dispose off the same.	
	kg./day (variable) from visitors and club	6. The PP should opt for additional	
	entry – comprising of organic / inorganic	provision towards storage of	
	waste.	optimum quantity of rainwater to	
	Downer requirement in about 1947 ICW (-1.	be utilized during fair-weather	
	Power requirement is about 1247 KW to be	season, considering the post-	
	sourced from Goa Electricity Dept. Back-	project usage of water.	
	up power through DG set (05 nos.) of total		
	capacity 1867.5 KVA is proposed. Air-		
	cooling of the DG sets are proposed instead		
	of traditional water cooling.		
	Solar water heating system is proposed to		
	be provided for hot-water supply.		
	Feasibility for installation of solar		
	photovoltaic cells for street lighting is		
	proposed to be assessed.		
	Central air-conditioning system using		
	water-cooled centrifugal chillers is		
	proposed to be installed.		
	Storm Water Management Plan (SWMP) is		
	proposed to be developed.		
	Environment Management Plan (EMP)		
	enclosed – refer pg. 31 to 35.		
<u> </u>			

<sup>\*</sup> Kindly refer recommendations of the Goa-SEAC members