Validity expires on 04.02.2025

सत्यमेव जयते

Proceedings of the State Environment Impact Assessment Authority Kerala

Present: Prof. (Dr.) K.P. Joy, Chairman; Dr. J. Subhashini, Member and Sri. P.H. Kurian, I.A.S., Member Secretary.

Sub: SEIAA- Environmental clearance for the Proposed Hospital Project in Sy. Nos. 1545, 1545/1-1, 1503/1, 1498/1, 1545/1-2, 1548/1, 1548/1-1, 1548, 1501/2, 1502, 1503/1, 1498, 1550/1-1, 1550/1-2, 1551/3-1, 1551/3-2, 1551/3-3, 1550/2, 1543/2-2, 1542/A-1, 1542/A-2, 1542/B, 1544/2, 1543/2-3, 1543/2, 1544/3, 1544, 1547/2-3, 1498/2, 1498/4-2, 1498/4-1, 1499/1-1, 1499, 1500, 1547, 1547/2-4, 1547/2-2-1, 1547/2-2-2, 1499/1-2, of Pettah Village, Thiruvananthapuram Taluk, Thiruvananthapuram District, Kerala, of Mr.P.Subramonian, Managing Partner, M/s Yespeeson's Enterprises - Granted-Orders issued

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STATE ENVIRONMENT IMPACT ASSESSMENT AUTHORITY, KERALA

No. 1141/EC/SEIAA/KL/2017 ***dated, Thiruvananthapuram 05.02.2018***

Ref: 1. Application received on 13.09.2017 from Mr.P.Subramonian, Managing Partner, M/s Yespeeson's Enterprises.

2. Minutes of the 79th meeting of SEAC held on 25th& 26th September 2017.

3. Minutes of the 80th meeting of SEAC held on 11th October 2017.

4. Minutes of the 81st meeting held on 30th 31st October 2017.

5. Minutes of the 82nd SEAC meeting held on 25 November 2017.

6. Minutes of the 78th SEIAA meeting held on 15.12.2017.

7. Affidavit dated 14.11.2017 & 16.01.2018 from Mr.P.Subramonian, Managing Partner, M/s Yespeeson's Enterprises.

ENVIRONMENTAL CLEARANCE NO. 15/2018

Mr.P.Subramonian, Managing Partner, M/s Yespeeson's Enterprises, C/o M/s S.Pottivelu Sabapathi Coil Street, Chalai Bazar,Thiruvananthapuram– 695036, has sought Environmental Clearance under EIA Notification, 2006 for the proposed Hospital Project in survey Nos.1545, 1545/1-1, 1503/1, 1498/1, 1545/1-2, 1548/1, 1548/1-1, 1548, 1501/2, 1502, 1503/1, 1498, 1550/1-1, 1550/1-2, 1551/3-1, 1551/3-2, 1551/3-3, 1550/2, 1543/2-2, 1542/A-1, 1542/A-2, 1542/B, 1544/2, 1543/2-3, 1543/2, 1544/3, 1544, 1547/2-3, 1498/2, 1498/4-2, 1498/4-1, 1499/1-1, 1499, 1500, 1547, 1547/2-4, 1547/2-2-1, 1547/2-2-2, 1499/1-2, Pettah

Village, Thiruvananthapuram Taluk, Thiruvananthapuram District, Kerala. It is interalia, noted that the project comes under the Category B, 8(a) of Schedule of EIA Notification 2006. No forest land is involved in the present project.

Details of the project as furnished by the applicant are as follows :-

BASIC INFORMATION OF BUILDING PROJECT
(To be filled in by the Project Proponent)
PART A

PROJECT DETAILS	
File No.	1141 / EC / SEIAA / KL / 2017
Name /Title of the project	Environmental Clearance for establishment of a Hospital Project to be developed by M/s YESPEESON'S ENTERPRISES.
Name and address of project proponent.	Mr. P. Subramonian, Managing Partner M/s YESPEESON'S ENTERPRISES C/o M/s S. Pottivelu, Sabapathi Coil Street, Chalai Bazar, Thiruvananthapuram, Kerala-695036.
Owner of the land	Ownership of the land is with M/s YESPEESON'S ENTERPRISES
Survey Nos. District/Taluk/ and Village etc.	Sy. Nos. 1545, 1545/1-1, 1503/1, 1498/1, 1545/1-2, 1548/1, 1548/1-1, 1548, 1501/2, 1502, 1503/1, 1498, 1498,1550/1-1, 1550/1-2, 1551/3-1, 1551/3-2, 1551/3-3, 1550/2, 1543/2-2, 1542/A-1, 1542/A-2, 1542/B, 1544/2, 1543/2-3, 1543/2, 1544/3, 1544, 1547/2-3, 1498/2, 1498/4-2, 1498/4-1, 1499/1-1, 1499, 1500, 1547, 1547/2-4, 1547/2-2-1, 1547/2-2-2, 1499/1-2, Pettah Village, Thiruvananthapuram Taluk & District, Kerala.
Category/Subcategory & Schedule	Category B 8(a)
Date of submission of Application	27-06-2017
Total Built up Area & No. of floors	41,819.84 sq. m. Basement + Gr. Floor + 8 floors
No. of apartments	Not applicable. Construction of hospital building project
Height of the building from the ground level	29.90 m.
GPS Co-ordinate	Latitude (N): 08°29'04.58" to 08°28'59.89" Longitude (E): 76°55'47.62" to 76°55'40.20"
Brief description of the project.	Construction of 369 bed hospital project in plot area of about 1.1747 ha. The total built-up area of about 41,819.84 sq.m. with supporting infrastructure

	facilities.
Is it a new Project or expansion / modification of an existing project?	State Environment Impact Assessment Authority (SEIAA), Kerala vide Order No. 24/SEIAA/KL/970/2012 dt. 15-03-2013 accorded integrated CRZ cum Environment clearance for the construction of a commercial complex with a built-up area of 37,521.43 sq.m. and with a plot area of 0.9591 ha. for the same location. The project proponent decided to change the nature of the project from Commercial Complex to Hospital project with increase in built-up area & plot area. Construction is in progress at the site. Pile foundation work in the area which is already accorded with Environment Clearance is completed.
Details of the Project Cost	About Rs. 115.50 Crores
If CRZ recommendation applicable?	The project site is near *Parvathy Puthanar* and hence the site attracts CRZ regulations. KCZMA vide their letter no. 1479/A3/12/KCZMA/S&TD dt. 20-02-2013 stated that the proposed project site has a coastal regulation zone of 21 m. landward of HTL and is in CRZ-II. It is also stated in their letter that the proposal then proposed is outside the CRZ limits.
Distance from nearby habitation	The project site is in Pettah Village and is falling in Thiruvananthapuram Corporation limits and several houses located within the 500 m. radius.
Distance from nearby forest, if applicable	None within the study area
Distance from protected area, Wildlife Sanctuary, National Park etc.	None within the study area
Distance from nearby streams/rivers/ National Highway Roads and Airport	Water body – Karali road is available between *Parvathy Puthanar and site* , (SW) Highway Road - N.H.66 Byepass Road, abutting the site (NE) Airport - Trivandrum Int. Airport, about 0.5 km. (NW)
Is ESA applicable? If so, distance from ESA limit	Not applicable
IMPACT ON WATER	
Details of water requirement per day in KLD	About 223 KL/day (which includes daily fresh water req. of about 175 KLD)
Water source/sources.	Source :- Stored Rain water (Tanks), KWA water supply and treated water from STP.
Details of water requirements met from water harvesting.	The project has provision for rain water storage tanks which will be used as source of water during rainy days (concurrent use) & non-rainy days.

What are the impacts of the proposal on the ground water?	The project has provisions for well water as standby arrangement during non rainy days. The ground water abstraction will be of permissible limit of yield of the well. Therefore, no impact on the ground water.
WASTE MANAGEMENT	
Explain the facilities for Liquid waste Management	Provision of STP/ETP for treatment of sewage/effluent and it's fully recycling for meeting the water requirement for flushing, horticulture, boiler & make-up water req. for cooling towers attached to HVAC system within the site.
Solid Waste Management	Provision of bio-gas generation plant / bio-bin system within the project site for disposal of the bio-degradable solid waste.
E-Waste Management	➢ Discarded computer parts, monitor, key boards etc. constitutes e-waste and this waste will be stored in an earmarked area. ➢ e-waste will be generated after 4-5 years latency period ➢ It will be stored in the service block building. ➢ e-waste will be disposed as per e-Waste (Management & Handling) Rules, 2016.
Facilities for Sewage Treatment Plant	Yes. Provision of STP/ETP for treatment of sewage/effluent and it's fully recycling for meeting the water requirement for flushing, horticulture, boiler & cooling water requirement within the site.
How much of the water requirement can be met from the recycling of treated waste water? (Facilities for liquid waste treatment)	The total domestic water requirement of about 223 KLD (which includes daily fresh water requirement of about 175 KL). Treated water from STP to be used for flushing of toilets, horticulture, boiler & cooling requirement.
What is the incremental pollution load from waste water generated from the proposed activities?	Treated water from STP (with BOD level as per KSPCB norms) will be only after providing additional aeration in the final treated water storage tank.
How is the storm water from within the site managed?	Provision of roof rain water storage tanks for meeting the non-flushing water requirement. The excess roof rain water and the surface runoff of the site will be chanalized through garland drain. The excess runoff (if any) from the site will be chanalized to the proposed drain along the N.H.66 only after de-siltation & oil removal.
Will the deployment of construction labourers particularly in the peak period lead to unsanitary conditions around the project site (Justify with proper explanation)	Yes. The proposed project has provision of labor colony and the domestic sewage will be channelised to the mobile STP for treatment of sewage during the construction period to handle the sewage. Also, it is proposed to have the food waste disposal from labor colony through the microbial bio-bin facility. Also, it is proposed to have a dedicated staff for good house

	keeping of the construction site premises and the labor colony premises. These measures will ensure good hygienic conditions around the labor colony.
What on- site facilities are provided for the collection, treatment & safe disposal of sewage ? (Give details of the quantities of wastewater generation, treatment capacities with technology & facilities for recycling and disposal)	The project has provision of mobile STP for the treatment of sewage during construction phase and STP/ETP within the project premises to treat the sewage/effluent during operation phase. The technology for the treatment of the sewage is up to tertiary level. The total quantity of sewage generation will be 179 KL/day. The treated water will be fully recycled for meeting the flushing, horticulture & cooling water requirement.
Give details of dual plumbing system if treated waste is used for flushing of toilets or any other use.	The treated waste water from the proposed STP & ETP during the operation phase of the project will be used for flushing, horticulture, boiler & cooling purposes and for which dual plumbing system is proposed.
TRAFFIC MANAGEMENT	
Sufficiency of parking space (explain)	Parking required as per KMBR = 295 Cars Parking Proposed = 483 Cars + 172 T.W.
Width of access road	The access to the project site is from 20 m. wide N.H. 66 bypass (previously N.H.47) (to be widened upto 45 m.) (*Panvel-Kochi-Kanyakumari*).
ENERGY CONSERVATION	
Details of power requirement and source of supply, backup source etc. What is the energy consumption assumed per square foot of built-up area ? How have you tried to minimize energy consumption?	The total power requirement is estimated to be about 2,025 kW and will be from by Kerala State Electricity Board. The project will make provision of D.G. Sets (750 kVA x 3 nos.) as standby arrangement of electricity. The proposed project will have provision of power saving and maximum natural light will be provided to minimize energy consumption. Other measures are: ➢ Water cooled chillers in place of air cooled chillers which are energy intensive & the treated water available from STP would be used as make-up water attached to the water cooled chillers. ➢ Savings in energy by the use of LED lamps. ➢ Thermal insulation by styro-foam in the roof to reduce heat gain to the building. Also, the side walls of the building will be constructed with hollow block for reduction in heat gain. ➢ Building Management System (BMS) through sensors for maximizing the energy conservation. ➢ Solar water heating system for the hot water requirement. ➢ Solar Energy operated Photovoltaic lighting for partial external areas lighting ➢ Electrical fixtures & HVAC unit would be of 5 star series as per Bureau of Energy Efficiency

	(BEE) to achieve reduction in energy consumption.
What type of, and capacity of power back-up to you plan to provide?	The project proponent has made provision of D.G. Sets (750 kVA x 3 nos.) as standby arrangement of electricity.
What are the characteristics of the glass you plan to use? Provide specifications of its characteristics related to both short wave and long wave radiation?	The glass used will be with low emissivity and the other specifications of the glass will comply with the norms as per ECBC. The characteristics of the glass are :- Coloured tinted float glass 6mm thick substrate with double low-e with reflective soft coating on face # 2, + 12mm Air gap + 6mm Heat Strengthened clear Glass of approved make having properties as visible Light transmittance (VLT) of 35 to 45 %, Light reflection internal 10 to 20%, light reflection external 10 to 20 %, shading coefficient (0.25- 0.28) and U value of 1.5 to 1.7 W/m2 degree K etc. The properties of performance glass shall be decided by technical sanctioning authority as per the site requirement.
What passive solar architectural features are being used in the building? Illustrate the applications made in the proposed project	All the relevant features are incorporated like the orientation of the building, shading effect etc.
Does the layout of streets & buildings maximize the potential for solar energy devices ? Have you considered the use of street lighting, emergency lighting and solar hot water systems for use in the building complex ? Substantiate with details	Due consideration has been taken for maximum use of the solar energy while preparation of layout plan. The project proponent shall made provision for solar panel system (hot water purpose) in building block area and solar energy devices will be used for street lighting, emergency lighting in the proposed project.
Is the shading effectively used to reduce cooling/heating loads? What principles have been used to maximize the shading of Walls on the East and the West and the Roof ? How much energy saving has been effected?	All the relevant features are incorporated like the orientation of the building, shading effect etc.
Do the structure use energy-efficient space conditioning , lighting and mechanical systems? Provide technical details. Provide details of transformers and motor efficiencies, lighting intensity and air-conditioning load assumptions ? Are you using CFC and HCFC free chillers? Provide	Suitable energy optimization will be adopted during the calculation of energy load of the proposed project. The space heating load will be minimized using passive solar structure and suitable buildings envelop material. Uses of incandescent lamp and halogen lamps have been avoided and energy efficient LED lamps will be used for all common area. The diesel generator sets shall be automatically

around the project site? Provide details	The D.G. sets would be attached with proper anti vibration pads to reduce any vibration impact to the site surrounding. The flue gases from the D.G. sets will be vented out through stack of appropriate height as per C.P.C.B. norms to reduce the impacts on air quality around the project site. The ambient noise level of the site is carried out through an accredited laboratory and the ambient noise level is well within the standard limit.
IMPACT ON BIODIVERSITY AND ECO RESTORATION PROGRAMMES	
Will the project involve extensive clearing or modification of vegetation (Provide details)	There are some of trees species, shrubs, herbs etc. existing at site as part of floral ecology. Some of the trees will be retained and the remaining will be cut for development of the proposed site. As part of the eco restoration, large number of saplings of native species would be planted. Due to the eco restoration, the impact to floral and faunal ecology will be short term.
What ate the measures proposed to minimize the likely impact on vegetation (details of proposal for tree plantation/ landscaping)	Due to the proposed development, some of the existing trees & various types of shrubs, herbs etc. will be cut from the site. As part of the eco restoration, large number of saplings of native species would be planted. Due to the eco restoration, the impact to floral and faunal ecology will be short term.
Is there any displacement of fauna – both terrestrial and aquatic. – If so what are the mitigation measures ? Presence of any endangered species or red listed category (in detail)	There will be no displacement of fauna due to the construction of the proposed project. There is no presence of endangered species or red listed category.
SOCIO- ECONOMIC ASPECTS	
Will the proposal result in any change to the demographic structure of local population ? Provide the details.	The proposed project is a construction of hospital building. The proposed building, during operation phase on full occupancy of the project, the maximum population expected is 3,533 persons (fixed/floating) and hence there will be influx of people (fixed) to the project area and surrounding. Some of the staff in the propose hospital building may reside within the project vicinity and hence there will be increase in demographic structure.
Give details of the existing social infrastructure around the proposed project	There are several hospitals, schools, colleges, religious places, commercial and residential buildings, Govt. and private offices, which are located within the project vicinity. The vicinity map showing the surrounding details of the proposed project is provided.
Will the project cause adverse effects on local communities, disturbances to sacred sites or other cultural values? What are the safeguards proposed?	The proposed project is a construction of hospital building. The project would not cause any adverse effects on local communities, disturbance to sacred sites or other cultural values. The proposed project is

	hospital building and thereby the living index of the people around the project site will definitely improve. Also there will be various ancillary activities like convenient shops, transport facilities etc. attached to the project which will benefit the local people and change their living condition.
BUILDING MATERIALS	
May involve the use of building materials with high –embodied energy. Are the construction materials produced with energy efficient process? (Give details of energy conservation measures in the selection of building materials and their energy efficiency)	The hospital building will be of centrally air conditioned building (except some portion), the selection of building materials plays a major role in the energy consumption. The proposed project will make all attempts to use to avoid building materials with high embodied energy. Cement blocks & hollow blocks will be replaced with country made red bricks. Further, the river sand will be replaced by manufactured sand from stone crushers. The glass used will be low emissivity and having U value as per ECBC norms.
Transport and handling of materials during construction may result in pollution, noise & public nuisance. What measures are taken to minimize the impacts?	The proposed project is a construction of hospital building project. All measures are taken to minimize the impacts within the site & surroundings. All vehicles which bring construction material to the site would possess Pollution Under Control Certificates (PUC). All vehicles would be of close body to avoid spread of dust from the loose materials, and vehicles which bring sand, stone dust, etc. would ensure that the above mentioned material are properly wetted during transportation to avoid dust generation. Pucca Road to be made in the construction site for the vehicle movement so that the dust generation due to the vehicular movement within the project site can be minimized. Stacking of construction material shall be confined to the project site only. All the D.G. Sets would have attached with Acoustic Enclosure for the sound pollution control and all sound generating construction activity to be minimized. Further barricading of the site with GI sheets of 10 ft height in the side abutting the public road during construction phase.
Are recycled materials used in roads and structures? State the extent of savings achieved?	The plastic (non-biodegradable solid waste) will be used along with coal tar during the construction of internal roads. This will increase the life of roads.
Give details of the methods of collection, segregation & disposal of the garbage generated during the operation phases of the project.	**Solid waste** ➢ The Solid Waste Management Rules, 2016 will be followed in the Solid Waste Disposal Mechanism at the site during operation phase. ➢ Collection & segregation within the site (bio-degradable waste (green bins), non-biodegradable waste (blue bins) and domestic hazardous waste (yellow bins).

	➢ The recyclable waste like packaging material, paper etc. would be sold through vendors. ➢ The Bio-degradable waste would be disposed through the bio-gas generation unit/bio bin system to be installed within the site. ➢ The bio-gas generated will be utilized in the kitchen/canteen area and the manure generated will be utilized for green area development within the premises. The domestic hazardous waste which includes discarded painted drums, pesticide cans, CFL bulbs, tube lights, expired medicines, broken mercury thermometers, used batteries, used needles and syringes and contaminated gauge etc. generated at the household level will be collected in yellow bins and to be handed over to authorized waste pickers or waste collectors. **Bio-medical waste** ➢ Bio-medical waste like infectious beddings, cotton, swabs, used syringes, discarded medicines, etc. from the hospital would be generated. Bio-medical waste Management & Handling Rules, 2016 will be followed. ➢ Collection & segregation at source by providing appropriate colour coded bins / containers as per the colour coding provided in the Bio-Medical Waste (Management & Handling) Rules. ➢ The bio-medical waste from the hospital outsourced through a Kerala State Pollution Control Board authorized agency (M/s *Indian Medical Association Goes Eco Friendly, IMAGE*).
RISK MANAGEMENT	
Are there sufficient measures proposed for risk hazards in case of emergency such as accident at the site during construction & post construction phase.	*Risk hazard from fire - List of equipments proposed for Fire Fighting Measures:-* *A. The major equipments proposed for Fire Fighting Measures are Main Hydrant Pump, Sprinkler Pump, Diesel Engine Pump, Jockey Pump.* *B. Capacity of Fire Water Storage Tanks & Number:-* *It is proposed to have Fire Water Storage Tan appropriate capacity of overhead tank for fire fightin provided at the tower.* *C. Fire Detecting Equipments: -* *The Fire Detecting Equipments would be as per BIS and NBC norms.* *D. Other Fire Fighting Measures: -* The other Fire Fighting Measures proposed includes, an Emergency Control Room, Separate Fire exit

	during emergency, all rooms with Fire Detector / Smoke Detector, Fire Extinguishes at each entry and exit point on each floor, (5 Kg, 10 Kg and 9 Ltr. capacity), Public address system etc. The Fire Fighting Measures are backed by Electrical supply from D.G. *sets in case of emergency.* *The nearest fire station is at Chacka Fire Station which is about 2 km. (NW) away from the project site.*
Storage of explosives/hazardous substance in detail	Yes, all precautionary measures in the storage & handling of HSD will be followed.
What precautions & safety measures are proposed against fire hazards? Furnish details of emergency plans	Details already provided above.
Litigation/court cases if any	No any litigation/court case pending.
AESTHETICS	
Will the proposed constructions in any way result in the obstruction of a view, scenic amenity or landscapes? Are these considerations taken into account by the proponents?	No. There is no any scenic beauty near the project site. Therefore, the proposed project in no way work as an obstruction of view.
Will there be any adverse impacts from new constructions on the existing structures? What are considerations taken into account?	The project site is within the Corporation limit area. The surrounding area is hospitals, schools, colleges, religious places, commercial and residential buildings, Govt. and private offices. The north east direction there is access road to the site (N.H. Byepass Road) and Karali Road in south west direction. There will be no any adverse impacts due to the development of the proposed project.
Whether there are any local considerations of urban form & urban design influencing the design criteria? They may be explicitly spelt out.	The proposed project would be constructed in conformity with the Kerala Municipality Building Rules (KMBR). As per seismic classification, the project site falls in Zone-III. No reported cloudburst in the area. Also, there is no hilly area around the project site, there is no chance of landslide. Structural design aspects as per the seismic codes – IS 1893 (2002), IS 13920 (1993) and IS 456 (2000) as applicable would be incorporated in our project.
Are there any anthropological or archaeological sites or artefacts nearby? State if any other significant features in the vicinity of the proposed site have been considered	There is no report of existence of any anthropological or archaeological site nearby the project area. The proposed project is located in Corporation limits of Thiruvananthapuram. The vicinity map showing the site & surrounding area is provided.

<table>
<tr><td>Details of CSR activity and the amount set apart per year</td><td>A detailed study on social status of the project site surroundings & need base study on proposed CSR activities were carried out. The summary of the report is given below :-<table><tr><th>Sl. No.</th><th>Particulars</th><th>Amount (Rs. In lakhs)</th></tr><tr><td>1.</td><td>Health Care</td><td>Recurring - Rs. 9 Lakhs
Non-recurring – Rs. 8 Lakhs</td></tr></table>The project proponent set apart an amount of about Rs. 9 lakh as recurring expenses and Rs. 8 lakhs as non-recurring expenses (primarily focusing on medical services to the people below poverty line) for CSR activities for the welfare of local community in consultation with the Thiruvananthapuram Corporation.</td></tr>
<tr><td>Details of NABET approved EIA Consultant engaged-Their name, address and accreditation details</td><td>M/s Environmental Engineers & Consultants Pvt. Ltd.
(NABET Accredited Consultant Organization)
Head Office :- A1-198, Janak Puri, New Delhi.
Branch Office:- C-306, Kanchanjunga Apartments, Palarivattom P.O., Kochi, Kerala.</td></tr>
<tr><td>Details of Authorized Signatory and address for correspondence</td><td>Mr. P. Subramonian, Managing Partner
M/s YESPEESON'S ENTERPRISES
C/o M/s S. Pottivelu,
Sabapathi Coil Street, Chalai Bazar,
Thiruvananthapuram, Kerala-695036.</td></tr>
<tr><td colspan="2">SUMMARY AND CONCLUSION</td></tr>
<tr><td>Overall justification for implementation of the project.</td><td>The proposed project is construction of hospital building project and the total implementation / completion period for the construction is about 30 months from the start of the construction.</td></tr>
<tr><td>Explanation of how adverse impact have been mitigated.</td><td>It is predicted that socio-economic impact due to this project will positively increase the chance of more employment opportunities for local inhabitants. There are no Resettlement and Rehabilitation issues involved in this project. The project infrastructures will be of use to people of the area. The revenue of the State Govt. will be definitely increase due to the proposed activity. The entire project area is devoid of any endemic / endangered flora and fauna. As part of the eco restoration with native species to a maximum possible extent. Also, rain water tanks are proposed for storage of rain water and for its subsequent use so as to conserve fresh water consumption. The municipal solid waste, bio-medical waste & e-waste will be handled and disposed as per norms. Thus the proposed project is not likely to affect the environment or adjacent ecosystem adversely and will ensure a sustainable development.</td></tr>
</table>

2. The proposal was placed in the 79th meeting of SEAC held on 25th& 26th September 2017. Further to the intimation of SEAC, the proponent and engineer attended the meeting and the engineer made a power point presentation about the salient features of the project briefly. The Committee appraised the proposal based on Form 1, Form I A , conceptual plan and other connected documents.

The Committee decided to defer the item for field inspection. Meanwhile the proponent was directed to produce the following documents.

1) The title of the application should reflect the change in the nature of utilization of land. Form I shall be revised accordingly and submitted for seeking EC for establishing the hospital.
2) Parking facility should be considerably enhanced and a detailed parking plan to be submitted.
3) The details of sustainable source of water should be furnished along with water yield test results for the open well.

Towards the CSR component the proponent agreed to furnish the number of BPL patients suffering from serious ailments who will be treated free of cost in the hospital in a year.

Accordingly, Inspection was conducted by a sub committee consisting of Sri S Ajayakumar and Sri John mathai, on 6/10/2017. The proposal is for a hospital building. An EC was issued previously for a commercial building in 15.3.2013 with certain conditions. This proposal is for a different use and hence is appraised as a new project. During the presentation, a few observations were made by the committee as follows

1. *The title of the application should reflect the change in nature of utilization of land. Form I shall be revised accordingly and submitted for seeking EC forestablishing the hospital.*
2. *Parking facility should be considerably enhanced and a detailed parking plan to be submitted.*
3. *The details of the sustainable source of water should be furnished along with water yield tests for the open wells.*

Observations made based on the field visit

1. *A revised site plan reflecting the latest proposals and containing location of Assembly point, STP, width of the road and internal circulation shall be submitted. Access to Karali road should also be indicated.*
2. *Parking plan shall contain number of parking bays in each floor including terrace.*
3. *Storm water drainage disposal should be shown in a plan. If it is planned to dispose into T S canal, necessary permissions shall be taken.*
4. *Verify the copy of NOC from Airports Authority*

5. *The site excavation for basement is limited to 2 m. The quantity of earth proposed to be taken out, if any, should be indicated.*
6. *A 21 m buffer distance is left from the TS Canal as no development zone on account of CRZ. The foot print of the building is >40 m from the canal.*

3. The proposal was placed in the 80th meeting of SEAC held on 11th October 2017. The committee decided to defer the item for considering in the next meeting.

4. The proposal was appraised by SEAC in its 81st meeting held on 30th 31st October 2017. The proposal was appraised by SEAC after considering Form I, Form IA, Conceptual plan, field visit report and all other documents and details provided by the proponent. The Committee directed the proponent to submit the following additional documents/details;

1. *A revised site plan reflecting the latest proposals and containing location of Assembly point, STP and details of the internalroads. Access to Karali road should also be indicated.*
2. *Parking plan with number of parking bays in each floor including terrace.*
3. *A 21 m buffer distance is to be left from the TS Canal as no development zone on account of CRZ.*

5. The proposal was placed before 82nd SEAC meeting held on 25 November 2017 .The Committee appraised the proposal based on Form 1, Form I A, field inspection report of the Sub Committee and all other documents submitted with the proposal. The committee took on record the clarifications and revised plan submitted by the proponent and decided to **Recommend for issuance of EC** subject to general conditions.

Towards the CSR component the proponent agreed to furnish the number of BPL patients suffering from serious ailments who will be treated free of cost in the hospital in a year. In this regard SEIAA may obtain a commitment from the proponent.

6. The proposal was placed before 78th SEIAA meeting held on 15.12.2017. Authority accepted the recommendation of SEAC and decided to issue EC subject to general conditions and the conditions of CRZ Clearance and all other green conditions for construction projects. A commitment regarding CSR is to be submitted by the proponent before the issuance of EC.

As per the landmark judgment dated 3rd September 2017 of the Principle Bench of National Green Tribunal (NGT), developers should give a satisfactory explanation on the facilities provided for open space, recreational grounds and parking facilities at the project site as they have an important bearing on the life of people. The above direction has to be complied by the Proponent.

A notarised affidavit for the commitment of CSR activities and also agreeing all the general conditions should be submitted before the issuance of EC.

(xviii) Environmental Clearance is subject to final order of the Hon'ble Supreme Court of India in the matter of Goa Foundation Vs. Union of India in Writ Petition (Civil) No.460 of 2004 as may be applicable to this project.

(xix) Any appeal against this Environmental Clearance shall lie with the National Environment Appellate Authority, if preferred, within a period of 30 days as prescribed under section 11 of the National Environment Appellate Act, 1997.

(xx) The project proponent should advertise in at least two local newspapers widely circulated in the region, one of which (both the advertisement and the newspaper) shall be in the vernacular language informing that the project has been accorded Environmental Clearance and copies of clearance letters are available with the Department of Environment and Climate Change, Govt. of Kerala and may also be seen on the website of the Authority at www.seiaakerala.org. The advertisement should be made within 10 days from the date of receipt of the Clearance letter and a copy of the same signed in all pages should be forwarded to the office of this Authority as confirmation.

(xxi) A copy of the clearance letter shall be sent by the proponent to concerned GramaPanchayat/ District Panchayat/ Municipality/Corporation/Urban Local Body and also to the Local NGO, if any, from whom suggestions / representations, if any, were received while processing the proposal. The Environmental Clearance shall also be put on the website of the company by the proponent.

(xxii) The proponent shall submit half yearly reports on the status of compliance of the stipulated EC conditions including results of monitored data **(both in hard copies as well as by e-mail)** and upload the status of compliance of the stipulated EC conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the respective Regional Office of MoEF, Govt. of India and also to the Directorate of Environment and Climate Change, Govt. of Kerala.

(xxiii) The details of Environmental Clearance should be prominently displayed in a metallic board of 3 ft x 3 ft with green background and yellow letters of Times New Roman font of size of not less than 40.

(xxiv) The proponent should provide notarized affidavit *(indicating the number and date of Environmental Clearance proceedings)* that all the conditions stipulated in the EC shall be scrupulously followed.

SPECIFIC CONDITIONS

I.Construction Phase

i. "Consent for Establishment" shall be obtained from Kerala State Pollution Control Board under Air and Water Act and a copy shall be submitted to the Ministry before start of any construction work at the site.

ii. All required sanitary and hygienic measures should be in place before starting construction activities and to be maintained throughout the construction phase.

iii. A First Aid Room will be provided in the project both during construction and operation of the project.

iv. Adequate drinking water and sanitary facilities should be provided for construction workers at the site, Provision should be made for mobile toilets. The safe disposal of wastewater and solid wastes generated during the construction phase should be ensured.

v. All the topsoil excavated during construction activities should be stored for use in horticulture/landscape development within the project site.

vi. Disposal of muck during construction phase should not create any adverse effect on the neighbouring communities and be disposed taking the necessary precautions for general safety and health aspects of people, only in approved sites with the approval of competent authority.

vii. Soil and ground water samples will be tested to ascertain that there is no threat to ground water quality by leaching of heavy metals and other toxic contaminants.

viii. Construction spoils, including bituminous material and other hazardous materials, must not be allowed to contaminate watercourses and the dump sites for such material must be secured so that they should not leach into the ground water.

ix. Any hazardous waste generated during construction phase, should be disposed off as per applicable rules and norms with necessary approval of the Kerala State Pollution Control Board.

x. The diesel generator sets to be during construction phase should be low sulphur diesel type and should conform to Environment (Protection) Rules prescribed for air and noise emission standards.

xi. The diesel required for operating DG sets shall be stored in underground tanks and if required, clearance from Chief Controller of Explosives shall be taken.

xii. Vehicles hired for bringing construction material to the site should be in good condition and should have a pollution check certificate and should conform to the applicable air and noise emission standards and should be operated only during non-peak hours.

xiii. Ambient noise levels should conform to residential standards both during day and night. Incremental pollution loads on the ambient air and noise quality should be closely monitored during construction phase. Adequate measures should be made to reduce ambient air and noise level during construction phase, so as to conform to the stipulated standards by CPCB/KSPCB.

xiv. Fly ash should be used as building material in construction as per the provisions of Fly Ash Notification of September, 1999 and amended as on 27th August 2003. (The above condition is applicable Power Stations).

xv. Ready mixed concrete must be used in building construction.

xvi. Storm water control and its re-use per CGWB and BIS standards for various applications.

xvii. Water demand during construction should be reduced by use of pre-mixed concrete, curing agents and other best practices referred.

xviii. Permission to draw ground shall be obtained from the Computer Authority prior to construction/operation of the project.

xix. Separation of grey and black water should be done by the use of dual plumbing line for separation of grey and black water.

xx. Fixtures for showers, toilet flushing and drinking should be of low flow either by use of aerators or pressure reducing devices or sensor based control.

xxi. Use of glass may be reduced by upto 40% to reduce the electricity consumption and load on airconditioning. If necessary, use high quality double glass with special reflective coating in windows.

xxii. Roof should meet prespective requirement as per Energy Conservation Building Code by using appropriate thermal insulation material to fulfil requirement.

xxiii. Opaque wall should meet perspective requirement as per energy Conservation Building Code which is proposed to be mandatory for all airconditioned spaces while it is aspirational for non-airconditioned spaces by use of appropriate thermal insulation material to fulfil requirement.

xxiv. The approval of the competent authority shall be obtained for structural safety of the buildings due to earthquake, adequacy of fire fighting equipments, etc. as per National, Building Code including protection measures from lightening etc.

xxv. Regular supervision of the above and other measures for monitoring should be in place all through the construction phase, so as to avoid disturbance to the surroundings.

xxvi. Under the provisions of Environment (Protection) Act, 1986, legal action shall be initiated against the protect proponent if it was found that construction of the project has been started without obtaining environmental clearance.

II. **Operation Phase**

i. The installation of the Sewage Treatment Plant (STP) should be certified by an independent expert and a report in this regard should be submitted to the Ministry before the project is commissioned for operation. Treated affluent emanating from STP shall be recycled / reused to the maximum extent possible. Treatment of 100% grey water by decentralised treatment should be done. Discharge of unused treated affluent shall conform to the norms and standards of the Kerala State Pollution Control Board. Necessary measures should be made to mitigate the odour problem from STP.

ii. The solid waste generated should be properly collected and segregated. Wet garbage should be composted and dry/inert solid waste should be disposed off to the approved sites for land filling after recovering recyclable material.

iii. Diesel power generating sets proposed as source of back up power for elevators and common area illumination during operation phase should be of enclosed type and conform to rules made under the Environment (Protection) Act, 1986. The height of stack of DG sets should be equal to the height needed for the combined capacity of all proposed DG sets. Use low sulphur diesel. The location of the DG sets may be decided with in consultation with Kerala State pollution Control Board.

iv. Noise should be controlled to ensure that it does not exceed the prescribed standards. During night time the noise levels measured at the boundary of the building shall be restricted to the permissible levels to comply with the prevalent regulations.

v. The green belt of the adequate width and density preferably with local species along the periphery of the plot shall be raised so as to provide protection against particulates and noise.

vi. Weep holes in the compound walls shall be provided to ensure natural drainage of rain water in the catchment area during the monsoon period.

vii. Rain water harvesting for roof run-off and surface run-off, as plan submitted should be implemented. Before recharging the surface run off, pre-treatment must be done to remove suspended matter, oil and grease. The borewell for rainwater recharging should be kept at least 5 mts.above the highest ground water table.

viii. The ground water level and its quality should be monitored regularly in consultation with Central Ground Water Authority.

ix. Traffic congestion near the entry and exit points from the roads adjoining the purposed project site must be avoided. Parking should be fully internalized and no public space should be utilized.

x. A Report on the energy conservation measures confirming to energy conservation norms finalise by Bureau of Energy Efficiency should be prepared incorporating details about building materials & technology, R & U Factors etc and submit to the Ministry in three months time.

xi. Energy conservation measures like installation of CFLs/TFLs for the lighting the areas outside the building should be integral part of the project design and should be in place before project commissioning. Use CFLs and TFLs should be properly collected and disposed off/sent for recycling as per the prevailing guidelines/rules of the regulatory authority to avoid mercury contamination. Use of solar panels may be done to the extent possible.

xii. Adequate measures should be taken to prevent odour problem from solid waste processing plant and STP.

xiii. The building should have adequate distance between them to allow movement of fresh air and passage of natural light, air and ventilation.

III Post Operational Phase

Environmental Monitoring Committee with defined functions and responsibility should foresee post operational environmental problems e.g. development of slums near the site, increase in traffic congestion, power failure, increase in noise level, natural calamities, and increase in suspended particulate matter etc. solve the problem immediately with mitigation measures

For Member Secretary, SEIAA