Validity expires on 16.03.2025

सत्यमेव जयते

Proceedings of the State Environment Impact Assessment Authority Kerala

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

Sub: SEIAA- Environmental Clearance for proposed expansion of existing hospital project in Sy. No. 1486/1-4-3-2, 1486/1-4-3, 1486/1-1, 1486/1-4-2, 1486/3-2, 1486, 1486, 1486/3-1, 1486, 1486/1-4-3-2, 1486/1-4-3-1, 1486/1-4-1, 1486/4-18, 1486/2, 1479/3-5, 1479/3-6, 1479/3-4, 1479/3-3, 1482/1-1, 1482/1-5, 1482/4-30, 1482/4-29, 1482/4-23, 1482/4-27, 1482/1-4-1, 1482/1-4-2, 1482/1-2, 1486/2, 1486/1-4-3-1, 1482/1-1, 1486/2-1, 1482/1-1-2, 1482/4-22, 1482/4-22-7, 1482/4-12, 1482/4-25, 1482/1-8, 1482/1-6, 1482/1-3, 1482/1-4, 1482/1-7, 1482/1-2, 1482/4-24-2, 1482/3-2-1-1-2-1, 1482/3-2-1-2, 1482/3-2-1, 1482/4-22, 1482/3-2-1-1-1, 1482/3-2-1-2, 1482/3-2-1-2-1, 1482/4-18-1, 1482/4-18-1, 1482/3, 1482/3-2-1, 1482/3-1-1, 1482/3-1, 1486/1-4-4, 1486/1-5-1-1, 1482/4-26, 1482/4-27, 1482/4-27, 1482/4-27-1, 1482/4-27, 1482/4-27-1, 1482/1, 1482/1-1-1, 1482/3-3-1, 1482/3-3-2, 1482/3-3, 1485/1, 1485/2, 1485/3, 1485/4, 1485/5, 1485/7, 1485/8, 1485/9, 1485/10 of Kadakampally Village, Trivandrum Municipal Corporation, Trivandrum Taluk & District, Kerala by Mr. E.M. Najeeb, Executive Director, M/s KIMS Healthcare Management Ltd. - Granted-Orders issued

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STATE ENVIRONMENT IMPACT ASSESSMENT AUTHORITY, KERALA

No. 1085/EC1/SEIAA/2016 ***dated, Thiruvananthapuram 17.03.2018***

Ref: 1. Application dated 02-05-2016 from Sri.E.M. Najeeb, Executive Director, M/s KIMS Healthcare Management Ltd.P.B. No. # 1, Anayara P.O., Trivandrum, Kerala-695029.

2. Minutes of the 68th meeting of SEAC, Kerala, held on 20th & 21st February 2017.
3. Minutes of the 69th meeting of SEAC, Kerala, held on 09th& 10th March, 2017.
4. Minutes of the 71st meeting of SEAC held on 20th& 21st April 2017.
5. Minutes of the 73rd meeting of SEIAA held on 15th September 2017.
6. Minutes of the 71st meeting of SEIAA held on 20th July 2017.
7. Minutes of the 73rd meeting of SEIAA held on 15th September 2017.
8. Minutes of the 80th meeting of SEAC held on 11th October, 2017.
9. Minutes of the 81st SEAC held on 30th & 31st October 2017.
10. Minutes of the 76th meeting of SEIAA held on 16.11.2017.

11. Minutes of the 81st meeting of SEIAA held on 08.03.2018.
12. Minutes of the 82nd meeting of SEIAA held on 15.03.2018.
13. Affidavit received from Sri.E.M. Najeeb.

ENVIRONMENTAL CLEARANCE NO. 58/2018

Sri.E.M. Najeeb, Executive Director, M/s KIMS Healthcare Management Ltd.P.B. No. # 1, Anayara P.O., Trivandrum, Kerala-695029, vide his application received online on 2nd May 2016 and acceptance letter for online application was given by SEIAA on 4th November 2016, has sought Environmental Clearance under EIA Notification, 2006 for the quarry project in Sy. No. 1486/1-4-3-2, 1486/1-4-3, 1486/1-1, 1486/1-4-2, 1486/3-2, 1486, 1486, 1486/3-1, 1486, 1486/1-4-3-2, 1486/1-4-3-1, 1486/1-4-1, 1486/4-18, 1486/2, 1479/3-5, 1479/3-6, 1479/3-4, 1479/3-3, 1482/1-1, 1482/1-5, 1482/4-30, 1482/4-29, 1482/4-23, 1482/4-27, 1482/1-4-1, 1482/1-4-2, 1482/1-2, 1486/2, 1486/1-4-3-1, 1482/1-1, 1486/2-1, 1482/1-1-2, 1482/4-22, 1482/4-22-7, 1482/4-12, 1482/4-25, 1482/1-8, 1482/1-6, 1482/1-3, 1482/1-4, 1482/1-7, 1482/1-2, 1482/4-24-2, 1482/3-2-1-1-2-1, 1482/3-2-1-2, 1482/3-2-1, 1482/4-22, 1482/3-2-1-1-1, 1482/3-2-1-2, 1482/3-2-1-2-1, 1482/4-18-1, 1482/4-18-1, 1482/3, 1482/3-2-1, 1482/3-1-1, 1482/3-1, 1486/1-4-4, 1486/1-5-1-1, 1482/4-26, 1482/4-27, 1482/4-27, 1482/4-27-1, 1482/4-27, 1482/4-27-1, 1482/1, 1482/1-1-1, 1482/3-3-1, 1482/3-3-2, 1482/3-3, 1485/1, 1485/2, 1485/3, 1485/4, 1485/5, 1485/7, 1485/8, 1485/9, 1485/10Kadakampally Village, Trivandrum Municipal Corporation, Trivandrum Taluk & 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
1.	File No	1085 / EC1 / SEIAA / 2016
2.	Name /Title of the project	Environment Clearance for construction of hospital Project to be developed by M/s KIMS Health Care Management Ltd.
3.	Name and address of project proponent.	Mr. E.M. Najeeb, Executive Director, M/s KIMS Healthcare Management Ltd. P.B. No. # 1, Anayara P.O., Trivandrum, Kerala-695029.
4.	Owner of the land	Private owned land

5.	Survey Nos. District/Taluk/ and Village etc.	Anayara in Survey Nos. 1486/1-4-3, 1486, 1486/1-4-1, 1482/4-18, 1479/3-5, 1479/3-6, 1479/3-4, 1479/3-3, 1482/1-1, 1482/1-5, 1482/4-30, 1482/4-29, 1482/4-23, 1482/4-27, 1486/1-2, 1482/1-1, 1486/2-1, 1482/1-1-2, 1482/4-22, 1482/4-22-7, 1482/4-12, 1482/4-25, 1482/1-8, 1482/1-6, 1482/1-3, 1482/1-4, 1482/1-7, 1482/1-2, 1482/4-24-2, 1482/3-2-1-1-2, 1482/3-2-1-2, 1482/3-2-1, 1482/4-22, 1482/3-2-1-1-1, 1482/3-2-1-1-2, 1482/3-2-1-2-1, 1482/4-18-1, 1482/4-18-1, 1482/4-18-1, 1482/3, 1482/3-2-1, 1482/3-1-1, 1482/3-1, 1486/1-5-1-1, 1482/4-26, 1482/4-27, 1482/4-27, 1482/4-27-1, 1482/4-27, 1482/4-27-1, 1482/1, 1482/1-1-1, 1482/3-3-1, 1482/3-3-2, 1482/3-3, 1479, 1482, 1486, Village Kadakampally, Trivandrum Municipal Corporation, Trivandrum Taluk & District, Kerala.
	PROJECT DETAILS	
6.	Date of submission of Application	02.05.2016
7.	Total Built up Area	41,509 sq. m. (east block)
8.	No of apartments	Nil
9.	Height of the building	30 m.
10.	Brief description of the project.	Proposed construction of hospital project in plot area of about 2.6420 ha. and proposed built-up area of about 78,669 sq.m., (existing 37,160 sq.m + proposed 41,509 sq.m) and 197 nos. hospital beds with supporting infrastructure facilities.
11.	Is it a new Project or expansion/modification of an existing project?	Construction of hospital building.
12.	Details of the Project Cost	Rs. 300 Crores
13.	Distance from nearby habitation	The project site is within the Trivandrum Municipality limits and several houses located within the 500 m. radius.
14.	Distance from nearby forest, if applicable	None within the area
15.	Distance from protected area, Wildlife Sanctuary, National Park etc.	None within the area
16.	Distance from nearby streams/rivers/National Highway Roads and Airport	*Water body :-* Amayizhanchan thodu : about 50 m. TS canal : about 1 km. Aakulam lake : about 1 km. Lakshadweep Sea : about 2 km.

		Highway : N.H.-47 Byepass – about 1 km. *Airport* : Trivandrum International Airport – about 5 km.
17.	Is ESA applicable? If so distance from ESA limit	Not applicable
	Impact on water	
18.	Details of water requirement per day in KLD	The total domestic water requirement of about 272 KLD (which includes daily fresh water requirement of about 174 KL). Treated water from STP/ETP to be used for flushing of toilets (about 108 KLD), Horticulture requirement (about 10 KLD), boiler requirement (about 5 KLD) and excess to make-up water requirement for cooling towers attached with HVAC system.
19.	Water source/sources.	Source :- Stored Rain water (Tanks), Wells, KWA water supply and treated water from STP.
20.	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 & non-rainy days. The total capacity of tanks (about 1,230 KL).
21.	What are the impacts of the proposal on the ground water?	The project has provisions for well waters supply as standby arrangement during non rainy days and minimal use of ground water.
	WASTE MANAGEMENT	
22.	Explain the facilities for 1) Liquid waste Management	Treated water from STP/ETP to be used for flushing of toilets (about 108 KLD), Horticulture requirement (about 10 KLD), boiler requirement (about 5 KLD) and excess to make-up water requirement for cooling towers attached with HVAC system.
	2) Solid Waste Management	The Solid Waste Management Rules, 2016 will be followed in the Solid Waste Disposal Mechanism at the site during operation phase. Provision of bio-gas generation plant within the project site for disposal of the bio-degradable solid waste.
	3) 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 disposed as per e Waste (Management & Handling) Rules, 2016.
	4) Facilities for Sewage Treatment Plant	Provision of STP/ETP for treatment of sewage and it's fully recycling for meeting the water requirement for flushing, horticulture, boiler & make-up water for cooling requirement within the site.
23.	How much of the water	Treated water from STP/ETP to be used for

	requirement can be met from the recycling of treated waste water? (Facilities for liquid waste treatment)	flushing of toilets (about 108 KLD), Horticulture requirement (about 10 KLD), boiler requirement (about 5 KLD) and excess to make-up water requirement for cooling towers attached with HVAC system.
24.	What is the incremental pollution load from waste water generated from the proposed activities?	Treated water from STP/ETP will be fully recycled and re-use within the site.
25.	How is the storm water from within the site managed?	➢ Provision of roof rain water storage tank with total water storage capacity of about 1,230 KL. ➢ The surface runoff will be chanalized through garland drain. Intermediate rain water harvesting pits will be constructed and excess runoff (if any) from the site will be properly chanalized to thodu (*Amayizhanchan*) in the south side also, there is a public drain (available along the access road i.e. Vinod Nagar Road). The excess run-off will be discharged only after de-siltation & oil removal.
26.	Will the deployment of construction labourers particularly in the peak period lead to unsanitary conditions around the project site (Justify with proper explanation)	Solid waste generation from the project during construction phase will be about 60 Kg/day and domestic sewage will be about 9 KL/day. The non-biodegradable waste and other packaging material will be sold to the vendors. The bio-degradable solid waste will be disposed in a bio-bin system for microbial composting and a mobile STP for the treatment of domestic sewage from the labour colony.
27.	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)	Provision of STP of about 262 KL capacity within the project premises to treat the sewage during operation phase. Also, provision of effluent treatment plant for treatment of laboratory & laundry waste. The technology for the treatment of the sewage/effluent is up to tertiary level treatment. The total quantity of sewage generation will be about 218 KL/day. The treated water will be fully recycled for meeting the flushing, horticulture, boiler & cooling water requirement.
28.	Give details of dual plumbing system if treated waste is used for flushing of toilets or any other use.	Dual plumbing system is proposed and Provision of STP/ETP for treatment of sewage and it's fully recycling for meeting the water requirement for flushing, horticulture, boiler & make-up water for cooling requirement within the site.
Energy Conservation		

29.	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?	Power requirement :- about 5989.98 kW Source :- KSEB & D. G. Sets (1,250 kVA x 3 nos. as back-up) Energy conservation measures :- ➢ Energy conservation measures for proposed building as per IGBC Green Homes Certification and target to achieve *'GOLD'* rating. ➢ 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. ➢ Solar Energy operated Photovoltaic lighting for partial external areas lighting. ➢ 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. ➢ Electrical fixtures & HVAC unit would be of 5 star series as per Bureau of Energy Efficiency (BEE) to achieve reduction in energy consumption.
30.	What type of, and capacity of power back-up to you plan to provide?	D. G. Sets (1,250 kVA x 3 nos. as back-up)
31.	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 low emissivity and having U value as per ECBC norms.
32.	What passive solar architectural features are being used in the building? Illustrate the applications made in the proposed project	All the applicable relevant features are incorporated like the orientation of the building, shading effect etc.
33.	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	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 hospital block and solar energy devices will be used for street lighting, emergency lighting in the proposed

	hot water systems for use in the building complex ? Substantiate with details	project
34.	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.
35.	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 specifications.	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 controlled to optimize their usage based on the actual load requirements at any time. Variable frequency drive systems would be adopted for the lifts, etc to maximize the energy saving.
36.	What are the likely effects of the building activity in altering the micro-climates ? Provide a self assessment on the likely impacts of the proposed construction on creation of heat island & inversion effects?	More open spaces are proposed within the site to creation of any heat islands. The roads and parking spaces would be with concrete slabs intermittent with grass on surrounding.
37.	What are the thermal characteristics of the building envelope? (a) roof (b) external walls; and (c) fenestration? Give details of the materials used.	The building construction material namely bricks, concrete and steel are being used in the construction. U-factor, also known as Thermal Transmittance, is heat transmission in unit time through unit area of a material or construction and the boundary air films, induced by unit temperature difference between the environments on each side. The glass used will be low with low emissivity and the other specifications of the glass will comply with the norms as per ECBC. Further details are given below :- EXTERNAL WALL - External finish + 200 mm thick Cement Blocks + Thermal insulation + Stone clading wall plastered on both side with 5 mm thick aluminium composite panel. ROOF - 150 mm thick expanded polystyrene insulation + Water Proofing Compound + 40 mm thick Roof Tiles Grouted with 1:4 Cement Mortar. GLASS - Glazing shall be of double glass with air

		gap (6 mm + 12 mm air gap + 6 mm)
38.	What is the rate of air non-conventional energy technologies are utilized in the overall energy consumption? Provide details of the renewable energy technologies used.	The use of non-conventional source of energy in the proposed construction project are as follows: - o Use of Solar Water Heater o Use of Solar Street Light o Use of LED Lamps
39.	Details of renewable energy (non – conventional) used.	Solar water heating system for the hot water generation and solar power operated street lights.
	IMPACT ON AIR ENVIRONMENT	
40.	What are the mitigation measures on generation of dust, smoke , odours, fumes or hazardous gases	The dust generation during construction phase will be controlled by enclosures at appropriate locations and also by sprinkling of water for suppression of dust. The gas/smoke generation expected is from D.G. sets only and the gases will be vented out through stack of appropriate height as per norms.
41.	Details of internal traffic management of the site.	The proposed project would provide vehicle parking facilities within the project premises. The parking plan for this project would follows KMBR guidelines. The total number of parking proposed is 410 Cars. The proposed site development will provide minimum drive way as per KMBR for easy & smooth vehicular movement. Provision through ramps is proposed for access of the physically challenged people and parking space for their vehicles.
42.	Details of noise from traffic, machines and vibrator and mitigation measures	The proposed project is a hospital project and there would be some increase in noise and vibration due to the vehicular movement within the project site. The project has provision of large area for the parking for the vehicles and the parking arrangement which is planned, that there would be easy movement of vehicles within the project area and smooth movement is provided for the vehicles to reduce the traffic congestion.
43.	Air quality monitoring in detail	The proposed project is hospital project and it will not increase atmospheric concentration of gases, the project has provision of D.G. Sets for standby arrangement of electricity and will run only during power failure. The stack attached to the proposed D.G. Sets will follow all the rules and regulations of State Pollution Control Board and Central Pollution Control Board. The ambient air quality of the site carried out through an accredited laboratory.
44.	Will the proposal create shortage of parking space for vehicles?	No

	Furnish details of the present level of transport infrastructure and measures proposed for improvement including the traffic management at the entry & exit to the project site.	
45.	Provide details of the movement patterns with internal roads, bicycles tracks, Pedestrian pathways, footpaths etc., with areas under each category	The conceptual plan clearly shows the internal traffic management with entry and exit to the proposed project site, all internal roads with width, pedestrian path ways etc. Further provision of ramps are proposed for the easy access to the building for physically challenged persons.
46.	Will there be significant increase in traffic noise & vibrations? Give details of the sources and the measures proposed for mitigation of the above.	The proposed project is a hospital project and there would be some increase in noise and vibration due to the vehicular movement within the project site. The project has provision of large area for the parking for the vehicles and the parking arrangement which is planned, that there would be easy movement of vehicles within the project area and smooth movement is provided for the vehicles to reduce the traffic congestion.
47.	What will be impact of DG sets & other equipments on noise levels & vibration in & ambient air quality around the project site? Provide details	The D.G. sets which would be used for the project will be with sound proof acoustic enclosures and hence there will be no impact to the surroundings. 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.
	SOCIO- ECONOMIC ASPECTS	
48.	Will the proposal result in any change to the demographic structure of local population ? Provide the details.	The proposed project is a hospital project. During operation phase, on full occupancy of the project, the maximum population expected is about 4,000 persons (floating/fixed) and hence there will be influx of people (fixed) to the project area and surrounding.
49.	Give details of the existing social infrastructure around the proposed project	There are several schools, colleges, religious places, commercial and residential buildings, Govt. and private offices, hospitals which are located around the proposed project.
50.	Will the project cause adverse effects on local communities,	The proposed project is a hospital project and thereby the living index of the people around the

	disturbances to sacred sites or other cultural values? What are the safeguards proposed?	project site will definitely improve. Also there will be various ancillary activities like institutions, convenient shops, transport facilities etc. attached to the project which will benefit the local people and change their living condition.
	BUILDING MATERIALS	
51.	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 proposed hospital project and the building is centrally air conditioned building, 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. 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. The glass used will be low emissivity and having U value as per ECBC norms.
52.	a) Transport and handling of materials during construction may result in pollution, noise & public nuisance. What measures are taken to minimize the impacts?	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.
53.	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.
54.	Give details of the methods of collection, segregation & disposal of the garbage generated during the operation phases of the	➢ 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-

	project.	biodegradable waste (blue bins) and domestic hazardous waste (yellow bins). ➢ The recyclable waste like packaging material, paper etc. would be sold through vendors and the area earmarked for the storage of non-biodegradable waste. ➢ The Bio-degradable waste would be disposed through the bio-gas generation units to be installed within the site. ➢ The bio-gas generated will be utilized in the hospital building 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. ➢ Further, the spent oil from the D.G. sets (defined as hazardous waste) will be sold to C.P.C.B. approved recyclers.
	Risk Management	
55.	Are there sufficient measures proposed for risk hazards in case of emergency such as accident at the site during construction & post construction phase.	Yes
56.	Storage of explosives/hazardous substance in detail	Yes, all precautionary measures in the storage & handling of HSD & PNG waste will be followed.
57.	What precautions & safety measures are proposed against fire hazards? Furnish details of emergency plans	All precautions & safety measures are proposed against the fire hazards as per norms of Fire & Rescue Department, Govt. of Kerala.
	AESTHETICS	
58.	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?	There is no scenic beauty near the project site.
59.	Will there be any adverse impacts from new constructions on the existing structures? What are	The proposed project site is located at Kadakampally Village which is falling in Municipal Corporation limits of Trivandrum. The surrounding

	considerations taken into account?	area is residential / offices / institutional developments with open land. There is a access road to the site in south side. There will be no any adverse impacts due to the development of the proposed project.
60.	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 Municipal 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.
61.	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	The proposed project is located in Trivandrum Municipality. There is no report of existence of any anthropological or archaeological site nearby the project area.
62.	Details of CSR activity and the amount set apart	Yes. 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 :- Sl. No. / Particulars / Rs in lakhs (approx.) 1 / Health care / Rs. 15.42 Lakhs (Recurring) Rs. 0.60 Lakhs (Non-Recurring) 2 / Promotion of education / Rs. 2.85 Lakhs (Recurring) Rs. 4.25 Lakhs (Non-Recurring) 3 / Environmental sustainability / Rs. 0.005 Lakhs (Recurring) Nil (Non-Recurring) Total / Rs. 18.32 Lakhs (Recurring) Rs. 14.15 Lakhs (Non-Recurring)
63.	Details of NABET approved EIA Consultant engaged-Their name, address and accreditation details	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. Accreditation no. :- NABET/EIA/1518/RA010

64.	Details of Authorized Signatory and address for correspondence	Mr. E.M. Najeeb, Executive Director, M/s KIMS Healthcare Management Ltd. P.B. No. # 1, Anayara P.O., Trivandrum, Kerala-695029.
	Summary and Conclusion	
65.	i) Overall justification for implementation of the project.	The proposed project is a construction of hospital project and the total implementation / completion period for the construction is about 36 months from the start of the construction.
66.	j) Explanation of how adverse impact have been mitigated.	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.

2. The proposal was considered in the 68th meeting of SEAC, Kerala, held on 20th & 21st February 2017. Further to the intimation of SEAC, the Proponent and the Engineer attended the meeting and a power point presentation about the salient features of the project was made. The Committee appraised the proposal based on Form 1, Form I A and Conceptual Plan. The Committee deferred the item for field visit to examine among other things the following aspects.

1. Parking facilities.
2. Water Balance
3. Waste Management
4. Alternate parking facility during construction phase.

Accordingly, the Subcommittee Members of SEAC were carried out site inspection and the report is given below:

Field visit to the project site of expansion of existing hospital by M/s KIMS healthcare management limited was carried out on 07.03.2017 by the sub-committee of SEAC, Kerala,

comprising Sri. S. Ajaya Kumar, Dr. George Chackacherry and Sri. John Mathai. The proponent and their representatives present at the site. The general layout of the structures within the proposed campus, terrain conditions of the site, limit of excavation, storm water management, component of RWH, internal traffic management, parking provisions, other facilities in the vicinity etc were examined.

The project is the expansion of the existing hospital which is located in Kadakampally village, Thiruvananthapuram Taluk. The land having an extent of 264.20 Ares is owned by M/s Great India Healthcare management Limited as per the application. Total built up area is 78669sq.m consisting of existing area of 37,160 sq.m and proposed built up area of 41,509 sq.m. Following observations were made during the inspection.

1. *Existing hospital is having builtuparea more than 20,000 sq.m but was constructed without EC. The proponents informed that the construction was made in parts with) during different time periods and therefore EC was not required at that time. The inspection team asked the proponents to submit their reasoning in writing with necessary documentary proofs.*

2. *The proponent told that the parking is adequate as per relevant building rule and appropriate government bodies shall be responsible for scrutinising the requirement. The total project contains three separate buildings. One old building on southern side of the road and another building and proposed building on the northern side of the road. The drawing attached to the application mentions carparking for the proposed building and one existing building and do not mention the parking requirement or parking availability for one existing building. However, the subcommittee feels that the project of this size and importance needs more car parking space. The requirement of dedicated parking for the Doctors and Staff of KIMS (1490 persons) itself need to be taken into consideration besides the visitors parking. The proponents discussed the feasibility of providing more parking spaces and promised to submit enhanced parking facilities at the project site. Even though the parking may be adequate as per local building rules, it must be enhanced for satisfactory traffic performance of such a large hospital. Therefore,a parking plan should be sought from the proponent showing parking requirement for all the three blocks collectively with available parking (existing + proposed).*

3. *The proposed construction in proposed at the present parking lot which cannot be used during the construction period. Therefore, adequate provision is to be provided during the construction period.The proponents told that they are providing adequate space during construction time at another location. The plan of that area should be sought from the proponents. Parking/obstruction shall be prohibited on the proposed 16 m wide approach road from Poonthi road.*

4. *All the entry and exits except one are provided to the existing road leading to air force station. But one exit is provided at the junction itself which will cause traffic congestion at the junction. This exit should be closed and alternate arrangements should be made.*

5. *Water requirement is calculated to be 5 lakh litres per day which is expected from KWA. The dependency on KWA shall be minimised and rain water harvesting tank of 35 lakh litre capacity (7 days requirement) shall be provided.*

6. *Emergency Assembly points are adequate.*

7. *Hazardous waste management is adequate. However, the proponent is requested to submit a detailed process description of waste management including processing of radio isotope waste.*

8. *Excavation for basement in loose earth must be carried out with utmost care such that the sides are adequately supported to prevent any kind of slumping. The steep slopes of the elevated northern flank also need modification with toe/side support. Detailed plan for this activity should be submitted.*

9. *Excavation is likely to result in excess earth which be given for governmental purposes under intimation to the District Collector.*

3. The proposal was again considered in the 69th meeting of SEAC, Kerala, held on 09th& 10th March, 2017. The Committee appraised the proposal based on Form I, Form I A, Conceptual Plan, field inspection report of the Sub Committee and all other documents submitted with the proposal. The Committee deferred the item for submission of the clarifications sought in the field visit report.

4. Subsequently, the proponent has submitted the documents sought by the 69th SEAC. The proposal was placed in the 71st meeting of SEAC held on 20th& 21st April 2017. The Committee verified the additional documents submitted by the proponent. The Committee was not convinced with the explanations given by the proponent that there was no requirement of Environment Clearance for the existing two buildings. The Committee opined that the combined built up area of both the existing buildings exceed the threshold limit of EIA Notification 2006 and therefore violates the provisions of the notification.

However, since the proponent requested for time to produce further documents in support of his argument that there was no violation in the construction, the Committee decided to defer the item.

5. The proponent has submitted the documents sought by SEAC in its 71st meeting.The proposal was considered in the 73rd meeting of SEAC held on 30th and 31st May 2017.The Committee appraised the proposal on the basis of the Form I and Form IA application, conceptual plan, environment management plan, field inspection report of the sub-committee, explanations submitted by the proponent and other connected documents.

The sub-committee during its site inspection has observed that the total built up area of the existing two buildings of the hospital complex is more than 20000 sq.m and there could be a possible case of violation. Accordingly the proponent was asked to explain the position. In the written explanations the proponent has admitted that the total built up area of the two existing buildings is 37160 m2. But according to him if the following two aspects are taken into consideration there is no violation.

1) The existing two buildings are in two different plots separated by a PWD road . Hence as per the building rules they are to be considered as separate structures and treated accordingly. Hence combined area cannot be reckoned for considering for the EC. Further, the first building of 25640 sq.m was completed much before the 2006 EIA notification and received completion report on 2.8.2005. Hence there is no violation.

The Committee rejected the above argument as the hospital as such is functioning as a single unit intimately sharing common amenities and services and whatsoever impacts it is making on the environment has to be assessed together.

2) As regards the second argument the proponent argues that the permit for the second building was grated on 24.4.2006 (Before the EIA notification) for 3 floors. Though the application for revised permit was submitted well before the EIA notification, due to administrative delay it was issued only on 3.2.2007. According to the proponent the EIA notification is applicable only to constructions commenced after the publication of EIA notification on 14.09.2006. In this case construction commenced well before the above date and hence there is no violation.

The EIA notification dated 14.09 2006 does not offer any such relief to the on-going constructions. Considering the circumstances of the case the Committee observed that there is a non –intentional technical violation. It deserves a lenient consideration. If the decision of SEIAA is to proceed further against the violation it may be done in accordance with procedures prevailed prior to 14.03.2017, the date on which MoEF issued notification revising procedures for treating cases involving violations, as the delay in processing the application received in SEIAA on 10.11.2016 is due to the administrative shortcomings.

The committee took the commitments intimated by the proponent vide letter dated 29.03.2017 into record and decided to recommend for issuance of EC subject to the general condition along with the specific conditions

1. Enhance total car parking facility for 648 cars which will include mechanical, multilevel and conventional car parking.
2. Parking facilities for 650 two wheelers
3. During construction stage proponent agreed to provide parking facility in a space away from the site with free to and fro shuttle service.
4. Rainwater storage capacity shall be increased to 3500 KL.
5. The sewage will be treated and recycled with the site itself.
6. Exit and entry will be as per revised plan submitted.
7. Emergency assembly points as shown in the revised conceptual plan should be provided.
8. Adequate safety measures shall be ensured to prevent slope failure of steep cutting.
9. Excess earth excavated shall be disposed off without causing environmental problem.

The proponent agreed to spend Rs.1 crore over a period of 3 years for CSR activities for the welfare of the local community in consultation with the local body. For the subsequent years SEIAA may obtain an appropriate commitment from the proponent.

6. The proposal was placed in the 71st meeting of SEIAA held on 20th July 2017. Authority decided to defer the item for detailed examination to ascertain whether there is violation of EIA Notification and place in the next meeting.

In the meantime, the proponent has submitted a representation dt.12.09.2017. They claim that as per the EIA Notification (Amendment) dt.07.07.2004, wherein building construction prior to 07.07.2004 are not required to take environmental clearance. One Sri. K.J. Chacko submitted complaint against the above project alleging that the area of the project comes under Wetlands as per the National Wetland Atlas Inventory published by Government of India.

7. The proposal was placed in the 73rd meeting of SEIAA held on 15th September 2017. Authority considered the representation submitted by the proponent dt.12.09.2017. In the light of the representation, SEAC is to re-examine the project whether there is a non-intentional technical violation or not and give unambiguous recommendation. SEAC may also re-examine the following points;

1) Whether the building connectivity needs NOC from Corporation & PWD?
2) Examine whether the designated parking area is used as paid parking ?

8. The proposal was placed in the 80th meeting of SEAC held on 11th October, 2017. The Committee decided to defer the item for seeking further clarification from the proponent.

9. The proposal was again placed before 81st SEAC held on 30th & 31st October 2017. SEIAA in its 73rd meeting has raised few issues with regards to the recommendations made

by SEAC with respect to proposal under consideration. After deliberations the Committee decided to furnish the following clarifications to SEIAA for taking further action in the matter.

1. SEIAA has opined that as per the EIA notification there is no provision for "lenient consideration" for a violation. This assumption is not factually correct. As regards the procedures to be adopted in dealing with violations MoEF & CC has issued OMs on 19.08.10;16.11.10;12.12.12 and 27.06.13. Finally it has also issued a notification on 14.03.17,superseding many of its earlier OMs, for providing a window of opportunity for regularising the violations. The validity of the above notification expired on 13.09.17. The 4th para of the above notification reads

> "The cases of violation will be appraised by respective sector Expert Appraisal Committees constituted under sub-section (3) of Section 3 of the Environment (Protection) Act,1986 with a view to assess that the project has been constructed at a site which under prevailing laws is permissible and expansion has been done which can be run sustainably under compliance of environmental norms with adequate environmental safeguards; and in case , where the finding of the Expert Appraisal Committee is negative , closure of the project will be recommended along with other actions under the law"

From the above para itself it is clear that the nature and gravity of violation of EIA notification definitely have to be considered while taking action under the Environment(Protection) Act. It is also pointed out that as per the documents made available to SEAC ,as on today the only recourse left before SEIAA for taking penal action against violation is to report the matter to govt. Decision with regards to the EC cannot be withheld for want of finalisation of proceedings against violation . Action against violations as per the Act will be separately persued by the govt either directly or through the State Pollution Control Board.

2. The Proponent has argued that after the amendments to the EIA notification on 7.7.2004, no EC is required for the construction works undertaken prior to the above date. Notification dt.07.07.2004 is for amending the original EIA notification issued in 1994. But the above amendment has no relevance while fixing the threshold limit of the built area for the applicability of EC as per the 2006 notification.
3. As on the date of site inspection the nature of the land was not that of a wet land its recordical classification has no bearing on environmental appraisal. If it does attract the provisions of the Conservation of Paddy Land and Wetland Act 2008 then the onus to take further action in this regard is on the concerned local body.
4. a) Whether the building connectivity needs NOC from Corporation & PWD ?
   b) Examine whether the designated parking area is used as paid parking?

The above issues do not have direct bearing on the appraisal of the proposal. Environmentally the connectivity does not raise any issue. If it is a violation of other

rules or acts , it is the duty of the concerned governmental agency to look into that. So also the nature of the designated parking (paid/non-paid) is not even remotely concerned with the appraisal. While appraising building and real estate projects SEAC generally follows the OM issued by the MoEF on 19.06.13. Only when issues like large scale constructions without the permission of the local body, inadequate width of the approach road etc, which have direct environmental consequences, crop up the Committee make its recommendations after considering its significance.

In the meantime the proponent filed a Writ petition no 32232/2017 before the Honorable High Court of Kerala in which SEIAA represented by its member Secretary as 2nd respondent and SEAC represented by its Chairman as 3rd respondent . The petitioner stated that he is entitled for deemed clearance.

10. The proposal was placed in the 76th meeting of SEIAA held on 16.11.2017. SEIAA decided that violation proceedings may be initiated as per relevant rules and provisions of Environmental Protection Act 1986. Authority will take decision on the issuance of EC after taking credible action. SEIAA also holds the view that a violator cannot claim to have deemed clearance.

11. The proposal was placed in the 81st meeting of SEIAA held on 08.03.2018. Authority noted that SEIAA has already taken a decision in its 79th meeting held on 09-01-2018 to make legal opinion applicable to other violation case also depending on the merit of each case. Hence Authority decided to defer the item till the reply for the legal opinion on violation is obtained.

In order to take immediate decision on several violation cases, a decision was taken to seek legal opinion from Government vide letter no.779/EC1/997/SEIAA/2015 dated 15.02.2018. Legal opinion has been received from Government on 13.03.2018 in SEIAA, which is applicable to this case also.

12. The proposal was placed in the 82nd meeting of SEIAA held on 15.03.2018. Meanwhile S.O No.1030 (E) dt.08th March 2018 has been issued by MoEF for dealing with violation cases. The said Notification has delegated the powers to SEIAA for dealing with violation cases. SEAC has recommended the proposal for issuance of EC, considering the case only as a technical violation.

Hence Authority accepted the recommendation of SEAC in the light of the above Notification and legal opinion and decided to issue EC subject to general conditions in addition to the specific condition as suggested by SEAC. The proponent should provide free medical treatment to BPL patients suffering from serious ailments referred to them by the local body to an amount equivalent to 2% of the total project cost. A notarised affidavit for the commitment of CSR activities and also agreeing all the above specific and general conditions should be submitted before the issuance of EC. The proponent has submitted the

affidavit vide ref (13) above and stating that all the specific and general conditions shall be strictly implemented.

13. Environmental Clearance as per the EIA notification 2006 is therefore granted to the proposed expansion of existing hospital project by Mr. E.M. Najeeb, Executive Director, M/s KIMS Healthcare Management Ltd. in Sy. No. 1486/1-4-3-2, 1486/1-4-3, 1486/1-1, 1486/1-4-2, 1486/3-2, 1486, 1486, 1486/3-1, 1486, 1486/1-4-3-2, 1486/1-4-3-1, 1486/1-4-1, 1486/4-18, 1486/2, 1479/3-5, 1479/3-6, 1479/3-4, 1479/3-3, 1482/1-1, 1482/1-5, 1482/4-30, 1482/4-29, 1482/4-23, 1482/4-27, 1482/1-4-1, 1482/1-4-2, 1482/1-2, 1486/2, 1486/1-4-3-1, 1482/1-1, 1486/2-1, 1482/1-1-2, 1482/4-22, 1482/4-22-7, 1482/4-12, 1482/4-25, 1482/1-8, 1482/1-6, 1482/1-3, 1482/1-4, 1482/1-7, 1482/1-2, 1482/4-24-2, 1482/3-2-1-1-2-1, 1482/3-2-1-2, 1482/3-2-1, 1482/4-22, 1482/3-2-1-1-1, 1482/3-2-1-2, 1482/3-2-1-2-1, 1482/4-18-1, 1482/4-18-1, 1482/3, 1482/3-2-1, 1482/3-1-1, 1482/3-1, 1486/1-4-4, 1486/1-5-1-1, 1482/4-26, 1482/4-27, 1482/4-27, 1482/4-27-1, 1482/4-27, 1482/4-27-1, 1482/1, 1482/1-1-1, 1482/3-3-1, 1482/3-3-2, 1482/3-3, 1485/1, 1485/2, 1485/3, 1485/4, 1485/5, 1485/7, 1485/8, 1485/9, 1485/10 of Kadakampally Village, Trivandrum Municipal Corporation, Trivandrum Taluk & District, Kerala subject to the specific conditions mentioned in para 5 & 12 above, the usual general conditions for projects other than mining appended hereto and the following green conditions should be strictly adhered to.

Green Conditions.

1. Adequate rain water harvesting facilities shall be arranged for.
2. Technology and capacity of the STP to be indicated with discharge point (if any) of the treated effluent.
3. Effluent water not conforming to specifications shall not be let out to water bodies.
4. Maximum reuse of grey water for toilet flushing and gardening and construction work shall be ensured.
5. Dual plumbing for flushing shall be done.
6. Provisions for disposal of e-wastes, solid wastes, non-biodegradables and separate parking facility for the buildings shall be provided.
7. Generation of solar energy to be mandatory for own use and/or to be provided to the grid.
8. There shall be no compromise on safety conditions and facilities to be provided by the project proponent, which shall be ensured for occupation, regularisation or consent to operate.

14. The clearance will also be subject to full and effective implementation of all the undertakings given in the application form, all the environmental impact mitigation and management measures undertaken by the project proponent in the documents submitted to

SEIAA, and the mitigation measures and waste management proposal as assured in the Form - 1 and Form-1A, Environment Management Plan as submitted. The assurances and clarifications given by the proponent in the application and related documents will be deemed to be part of these proceedings as conditions as undertaken by the proponent, as if incorporated herein.

15. Validity of the Environmental Clearance will be seven years from the date of issuance of E.C, subject to inspection by SEIAA on annual basis and compliance of the conditions, subject to earlier review of E.C in case of violation or non-compliance of any of the conditions stipulated herein or genuine complaints from residents within the scrutiny area of the project.

16. Compliance of the conditions herein will be monitored by the State Environment Impact Assessment Authority or its agencies and also by the Regional Office of the Ministry of Environment and Forests, Govt. of India, Bangalore.

i. Necessary assistance for entry and inspection by the concerned officials and staff should be provided by the project proponents.

ii. Instances of violation if any shall be reported to the District Collector, Thiruvananthapuram to take legal action under the Environment (Protection) Act 1986.

iii. The given address for correspondence with the authorized signatory of the project is, Sri.E.M. Najeeb, Executive Director, M/s KIMS Healthcare Management Ltd.P.B. No. # 1, Anayara P.O., Trivandrum, Kerala-695029

Sd/-
P.H. KURIAN, .I.A.S,
Member Secretary (SEIAA)

To,

Sri.E.M. Najeeb,
Executive Director,
M/s KIMS Healthcare Management Ltd.
P.B. No. # 1, Anayara P.O.,
Trivandrum, Kerala-695029

Copy to:

1. MoEF Regional Office, Southern Zone, Kendriya Sadan, 4th Floor, E&F Wing, II Block, Koramangala, Bangalore-560034
2. The Additional Chief Secretary to Government, Environment Department
3. The District Collector, Thiruvananthapuram
4. The District Town Planner, Thiruvananthapuram
5. The Tahsildhar, Thiruvananthapuram Taluk
6. The Member Secretary, Kerala State Pollution Control Board
7. The Director, Dept. of Environment and Climate Change, Govt. of Kerala, Tvm-24
8. The Secretary, Zonal Office of Municipal Corporation of Thiruvanathapuram, Kachani Aruvikkara Road, Vattiyoorkavu, Nettayam, Trivandrum – 695013.
9. Chairman, SEIAA, Kerala
10. Website
11. Stock file
12. O/c

Forwarded/By Order

Administrator, SEIAA

GENERAL CONDITIONS *(for projects other than mining)*

(i) Rain Water Harvesting capacity should be installed as per the prevailing provisions of KMBR / KPBR, unless otherwise specified elsewhere.

(ii) Environment Monitoring Cell as agreed under the affidavit filed by the proponent should be formed and made functional.

(iii) Suitable avenue trees should be planted along either side of the tarred road and open parking areas, if any, inclusive of approach road and internal roads.

(iv) The project shall incorporate devices for solar energy generation and utilization to the maximum possible extent with the possibility of contributing the same to the national grid in future.

(v) Safety measures should be implemented as per the Fire and Safety Regulations.

(vi) STP should be installed and made functional as per KSPCB guidelines including that for solid waste management.

(vii) The conditions specified in the Companies Act, 2013 should be observed for Corporate Social Responsibility.

(viii) The proponent should plant trees at least 5 times of the loss that has been occurred while clearing the land for the project.

(ix) Consent from Kerala State Pollution Control Board under Water and Air Act(s) should be obtained before initiating activity.

(x) All other statutory clearances should be obtained, as applicable, by project proponents from the respective competent authorities including that for blasting and storage of explosives.

(xi) In the case of any change(s) in the scope of the project, the project would require a fresh appraisal by this Authority.

(xii) The Authority reserves the right to add additional safeguard measures subsequently, if found necessary, and to take action including revoking of the environment clearance under the provisions of the Environment (Protection) Act, 1986, to ensure effective implementation of the suggested safeguard measures in a time bound and satisfactory manner.

(xiii) The stipulations by Statutory Authorities under different Acts and Notifications should be complied with, including the provisions of Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and control of Pollution) act 1981, the Environment (Protection) Act, 1986, the Public Liability (Insurance) Act, 1991 and EIA Notification, 2006.

(xiv) The environmental safeguards contained in the EIA Report should be implemented in letter and spirit.

(xv) Provision should be made for supply of kerosene or cooking gas and pressure cooker to the labourers during construction phase.

(xvi) Officials from the Regional of MOEF, Banglore who would be monitoring the implementation of environmental safeguards should be given full co-operation, facilities and documents/data by the project proponents during their inspection. A complete set of all the documents submitted to MoEF should be forwarded to the CCF, Regional Office of MOEF, Bangalore.

(xvii) These stipulations would be enforces among others under the provisions of Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control Pollution) at 1981, the Environment (Protection) Act, 1986, the Public Liability (Insurance) Act, 1991 and EIA Notification, 2006.

(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