Validity expires on 19.04.2024

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Proceedings of the State Environment Impact Assessment Authority Kerala

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

Sub: SEIAA-Environmental clearance for the proposed Shopping Mall project in Re-survey Nos. 188/24 & 188/24 p at Ollur Village, Thrissur Corporation, Thrissur Taluk & District, Kerala of Sri.M.A.Mehaboob, M/s HiLITE Mall (Thrissur) LLP- EC Granted-Orders issued

State Environment Impact Assessment Authority, Kerala

No. 988/EC1/4809/SEIAA/2015 **Dated, Thiruvananthapuram 20.04.2017**

Ref: 1. Application dated 21.11.2015 from Sri.M.A.Mehaboob (Designated Partner) M/s HiLITE Mall (Thrissur) LLP
2. Minutes of the 60th meeting of SEAC held on 28th and 29th July, 2016.
3. Minutes of the 66th meeting of SEAC held on 19th December, 2016.
4. Minutes of the 64th meeting of SEIAA held on 23rd February 2017.

ENVIRONMENTAL CLEARANCE NO.28/2017

Sri.M. A. Mehaboob (Designated Partner), M/s HiLITE MALL (Thrissur) LLP, G-1003, T1, Business Park, HiLITE City, Thondayad Bypass, GA College P.O., Kozhikode, Kerala-673014 has submitted an application for Environmental Clearance of the Proposed shopping mall, vide his application dated 21.11.2015 and has sought environmental clearance under the EIA Notification, 2006 for the shopping mall project in Re-survey Nos. 188/24 & 188/24 p at Ollur Village, Thrissur Corporation, Thrissur 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. The height of the proposed building is 30 m. It is proposed to construct total a commercial complex building block along with first aid facility within the site. FAR proposed is 38,189.92 sq.m. (@2.40);The max. floor of the building is with Basement + Lower Ground + Ground + 6 floors with built-up area 68,553.39 sq.m. which is more than 20,000 sq. m. and less than 1,50,000 sq. m. The total power requirement is 3,382 kVA Power Source: KSEB. Total capacity of D.G. Sets proposed (1,500 kVA x 2 nos. + 1,010 x 1 no.) (Standby power back up arrangement) Fuel – Low Sulphur HSD. Renewable energy devices used is solar water heaters. The proponent has stated that there is no litigation pending against the project and /or land in which the project is proposed to be set up.

BASIC INFORMATION OF CONSTRUCTION PROJECT

PART A

I. Project details		
1	File No.	988/SEIAA/EC1/4809/2015
2	Name /Title of the project	Proposed Shopping Mall Project by M/s HILITE MALL (THRISSUR) LLP.
3	Name and address of project proponent.	Mr. M.A. MEHABOOB (Designated Partner) M/s HiLITE MALL (THRISSUR) LLP G-1003, T1, Business Park, HiLITE City, Thondayad Bypass, GA College P.O., Kozhikode, Kerala-673014.
4	Owner of the land	Private Land
5	Survey No. District/Taluk/ and Village etc.	Re-survey Nos. 188/24, 188/24 p
6	Nature of the proposal – lease or permit with evidence.	N.A.
7	Date of submission of Application	21.11.2015
8	Brief description of the project.	Proposed Shopping Mall with Retail shops, Multiplex, Restaurant with supporting infrastructure facilities etc. in a plot area of 1.6029 ha. and built-up area will be of 69218.1sq.m.
9	Details of Authorized Signatory and address for correspondence	Mr. M.A. MEHABOOB (Designated Partner) M/s HiLITE MALL (THRISSUR) LLP G-1003, T1, Business Park, HiLITE City, Thondayad Bypass, GA College P.O., Kozhikode, Kerala-673014.
II. Land Details		
10.	a) Extent of area in hectares	1.6029 ha.
11.	b) Is the property forest land/Govt. land/own land/patta land	Own land
12.	c) Quantity of top soil/over burden produced and managed	• There is a level difference of about 3 m. between north to south side of the property. • Excavation of earthwork will be carried out at site for the foundation of structures and for accommodating the parking floors (basement lvl. -6.55 m. & lower ground -3.10 m. lvl.). The total excavated earth will be of about 69,052 cu.m. The

		top soil (1,000 cu.m.) which will used for future landscaping purposes. The remaining will be used for back filling (5,094 cu.m.), internal road construction (5,157 cu.m.) within the site. The excess excavated earth (about 57,801 cu.m.) will be sent to the Highway Authority (NHAI) for external road widening purposes. (Request letter is received).
13.	d) Latitude and Longitude	Latitude: 10°29'46.92" to 10°29'42.29" Longitude : 76°15'27.95" to 76°15'23.24"
14.	e) Topography of land and elevation	There are some of native species of trees and different varieties of shrubs, herbs, grass & climbers at site. Also, there is old single storey building with tiled roof. The elevation of the site is about 24 m. MSL
15.	f) Slope analysis	There is a level difference of about 3 m. and the slope is towards north to south side of the project site.
16.	g) Will there be any significant land disturbance resulting in soil erosion, subsidence & natural drainage.	No, the project area and it's surroundings falls under Zone-III, according to the Indian Standards Seismic Zoning Map and falls in Zone-III. No reported earth quake, subsidence, erosion, cloudburst in the area or in its surroundings. Also, there is no hilly area around the project site, there is no chance of landslide.
17.	h) Access road to the site width and condition	The access to the project site is from 16 m. wide Thrissur-Mannamangalam Road.
18.	i) Will there be any adverse impact on the aesthetics of the proposal site	No, there will be no adverse impacts envisaged on the aesthetics of the project site due to the development of this project. Moreover, more employment will be created as a result of positive induced development in the immediate vicinity of project site.
	III. Mining details	
19.	a) Minimum and Maximum height of excavation.	N.A
20.	b) Life of mine proposed.	
21.	c) Underground mining if any proposed	
22.	d) Method of Mining	
23.	e) Distance from the adjacent quarry	
24.	f) Cluster condition if any	
25.	g) Has "No cluster certificate"	

	submitted?	
26.	h) Distance from nearby habitation	
27.	i) Distance from nearby forest, if applicable	
28.	j) Distance from protected area, Wildlife Sanctuary, National Park etc.	
29.	k) Distance from nearby streams/rivers/National Highway and Roads	
30.	l) Is ESA applicable? If so distance from ESA limit	
31.	m) Has approved mining plan, prepared by RQP submitted?	
32.	n) Capacity of production in TPA	
33.	o) Details of mining process	
IV. Details of Project cost		
34.	a) Land cost	
35.	b) Plant and Machinery	
36.	c) Total Cost	Total Cost of Project is about Rs.200 Crores
37.	**V.** Financial Statement including funding source and details of insurance etc.	Source:- Own source & bank loan Insurance:- Insurance to the workers and machinery during construction phase.
38.	Management Plan	

		Air Pollution	Provision of stack will be made for D.G. sets for dispersion of flue gas and Green belt development will also help to manage air pollution.
		Water Pollution	Provision of STP for treatment of sewage and treated water from STP will be used for meeting the water requirement for flushing, horticulture & cooling water requirement within the site.
		Noise	Provision of acoustic enclosure will be made for D.G. sets as noise control measures.
		Solid Waste Management	Provision of bio-gas generation plant within the site for disposal of the bio-degradable solid waste.
		Eco-restoration	As part of the eco restoration, large number of saplings of native species would be planted within green area.
	Management Plan		
39.	VI. Whether Environment Management Plan or Eco restoration Plan satisfactory?		Yes, Mentioned it as S.L.No.38.
40.	VII. Does it suggest mitigation measures for each activity		Yes.
41.	VIII. If Pre-Feasibility Report (PFR) satisfactory		N.A
42.	**IX.** Does it need public hearing		No, Public Hearing required for building construction projects.
43.	**X.** Details of litigation and Court verdict if any		No litigation pending
44.	**XI.** Details of public complaint, if any		Proposed to develop a construction project and no complaint received.
45.	**XII.** Details of statutory sanction required		a. Building permit b. NOC from Pollution Control Board c. Environment Clearance from SEIAA /MoEF d. NOC from Fire & Rescue Department
46.	**XIII.**If CRZ recommendation applicable?		N.A

PART B

Environment Impact Assessment and Mitigation Measures

Impact on water

47.	a) Details of water requirement per day in KLD	The total domestic water requirement of about 201 KLD (which includes daily fresh water requirement of about 102 KL). Treated water from STP to be used for flushing of toilets (about 121 KLD) , horticulture (about 4 KLD) and excess to use as make-up water requirement for

		cooling towers attached to HVAC system.
48.	b) Water source/sources.	Source :- Stored Rain water, Wells, KWA water supply and treated water from STP.
49.	c) Expected water use per day in KLD.	The total domestic water requirement of about 201 KLD (which includes daily fresh water requirement of about 102 KL).
50.	d) Details of water requirements met from water harvesting.	Yes, The project has provision for rain water storage tanks which will be used as source of water during rainy days & non-rainy days.
51.	e) What are the impact of the proposal on the ground water?	The source of water for the project are :- Stored Rain water (Tanks), Wells, KWA water supply and treated water from STP. The use of ground water (standby arrangement) only based on the permissible yield from the large open wells. Thereby no impact to the ground water.
52.	f) How much of the water requirement can be met from the recycling of treated waste water? (Facilities for liquid waste treatment)	Treated water from STP to be used for flushing of toilets (about 121 KLD) , horticulture (about 4 KLD) and excess to use as make-up water requirement for cooling towers attached to HVAC system.
53.	g) What is the incremental pollution load from waste water generated from the proposed activities?	Nil, the waste water from the site will be treated from STP and treated water will be used for flushing, horticulture and excess to use as make-up water requirement for cooling towers attached to HVAC system at site.
54.	h) How is the storm water from within the site managed?	The project has provision for rain water storage tanks which will be used as source of water during rainy days & non-rainy days. The excess run-off from the site will be properly chanalized to the drain with 5 recharge pits and will be discharged only after de-siltation & oil removal to the drain.
Impact on Biodiversity and Eco restoration Programmes		
55.	a) Will the project involve extensive clearing or modification of vegetation (Provide details)	Yes, There are some of native species of trees and different varieties of shrubs, herbs, grass & climbers at site. Also, there is old single storey building with tiled roof. For the development of the proposed project, there will be clearance most of the existing trees & different varieties of shrubs, herbs, grass & climbers and existing structures.
56.	b) What ate the	It is proposed to have large numbers (mostly flowering,

	measures proposed to minimize the likely impact on vegetation (details of proposal for tree plantation/ landscaping)	medicinal & shady trees) of tree plantation (native species) within the project area.
57.	c) Is there any displacement of fauna – both terrestrial and aquatic. – If so what are the mitigation measures ?	No displacement of fauna from the site due to the development of this project.
	d) Presence of any endangered species or red listed category (in detail)	Nil
	Impact on Air Environment	
58.	a) What are the mitigation measures on generation of dust, smoke and air quality	Provision will be made for D.G. sets with noise control measures and stack for flue gas. As part of the eco restoration, large number of saplings of native species would be planted.
59.	b) Details of internal traffic management of the site.	• The parking proposed at basement & lower ground level and Ground to 5th floor level within the site. • It is proposed to have dedicated entry/exits arrangement for the smooth movement of vehicles. • All internal road width will be made as per KMBR requirement. • Provision through ramps is proposed for access of the physically challenged people and parking space for their vehicles.
60.	c) Details of noise from traffic, machines and vibrator and mitigation measures	The proposed project is a shopping mall project. The source of noise will be from D.G. sets & vehicular movement. 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. Provision will be made for D.G. sets with noise control measures and use of anti vibration pads.

61.	d) Impact of DG sets and other equipments on noise and vibration and ambient air quality around the project site and mitigation measures	Noise will be created from operation of D.G. sets but all the D.G. sets shall be silent generators to restrict thenoise within the permissible limit. 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. Noise barriers all along the project boundary will be created. Also the marble / tile cutting area noise barrier enclosures will be created at appropriate height during construction phase. Noise will be created from operation of D.G. sets but all the D.G. sets shall be silent generators to restrict thenoise within the permissible limit. 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. Noise barriers all along the project boundary will be created. Also the marble / tile cutting area noise barrier enclosures will be created at appropriate height during construction phase.
62.	e) Air quality monitoring in detail	Yes, ambient air quality monitoring carried out from an approved laboratory at site and report of the same is already submitted
	Energy Conservation	
63.	a) Details of power requirement and source of supply.	The total power requirement is estimated to be about 3,382 kVA and will be met from Kerala State Electricity Board & D.G. Set (standby). The project will make provision of D.G. Sets (1,500 kVA x 2 nos. + 1,010 x 1 no.) as standby arrangement of electricity.
64.	b) Details of renewable energy (non – conventional) used.	Solar water heating system for the hot water generation and solar power operated street lights.
	Risk Management	
65.	a) Are there sufficient measures proposed for risk hazards in case of emergency such as accident at the site?	This is a shopping mall project and no storage of hazardous chemicals (as per MSIHC Rules) will be done, apart from diesel storage for D.G. Sets which will be operated only during emergency and suitable arrangement will be adopted for the same. It will be stored in HDPE drums and kept in covered rooms under lock and key.
66.	b) Are proposals for fencing around the quarry	Not Applicable, the project is a construction project not a quarry project

	satisfactory? c) Storage of explosives/hazardous substance in detail	
	d) Facility for solid waste management	Solid waste generation will be about 1,054 kg/day and which will be collected separately as Bio-degradable and Non-biodegradable waste as per the MSW Rules, 2000. The non-biodegradable and recyclable waste would be sold to the vendors. The biodegradable waste would be sent to the bio-gas generation plant. Further, the spent oil from the D.G. sets (defined as hazardous waste) will be sold to C.P.C.B. approved recyclers.

Socio Economic Impacts

67.	a) Will the project cause adverse effects on local communities disturbance to sacred sites or other cultural values. What are the safe guards proposed?	No
68.	b) Will the proposal result in any changes to the demographic structure of local population. If so, provide details.	The proposed project is a shopping mall project. During operation phase, on full occupancy of the project, the maximum population expected will be of about 9,528 Persons (floating population) and hence there will be influx of people to the project area.
69.	c) Are the CSR proposals satisfactory. Give details	Yes, the CSR proposal is as per norms and brief summary of CSR Activities with budgetary allocation proposed are given below:

Proposed common CSR Budget

Sl.No.	Particulars	Amount Rs. In lakhs
1.	Promotion of education	Recurring expense = 6.0 lakhs Non-recurring expense = 12.1 lakhs
2.	Environment Sustainability	Recurring expense = Rs. 5.5 lakhs Non-recurring expense = 2.2 lakhs
3.	Help to helpless	Recurring expense = Rs. 3.1 lakhs Non-recurring expense = Rs. 2.5

				lakhs	
			Total Amount	**Recurring expense = Rs. 14.6 lakhs Non-recurring expense = 16.8 lakhs**	
70.	d) What are the projects benefits in terms of employment potential?	The proposed project is housing project and would provide job facilities for about 867 persons in the operation phase and about 150 nos. of labourers (skilled/unskilled) during construction phase.			
PART C					
71.	Details of NABET approved EIA Consultant engaged- Their name, address and accreditation details	**M/s Environmental Engineers & Consultants Pvt. Ltd.** (NABET Accredited Consultant Organization -) Certificate No. NABET/EIA/1518/RA010 *Head Office :*-A1-198, JanakPuri, New Delhi. *Branch Office:-* C-306, Kanchanjunga Apartments, Palarivattom P.O., Kochi, Kerala.			
	Summary and Conclusion				
72.	a) Overall justification for implementation of the project.	The proposed project is shopping mall project and it is estimated that for construction of about 69218.1sq.m.built up area and the construction period will be about 36 months.			
73.	b) Explanation of how adverse impact have been mitigated.	**ENVIRONMENT MANAGEMENT PLAN:**			
			Air Pollution	Provision of stack will be made for D.G.sets for dispersion of flue gas and Green belt development will also help to manage air pollution.	
			Water Pollution	Provision of STP for treatment of sewage and treated water from STP will be used for meeting the water requirement for flushing, horticulture & cooling water requirement within the site.	
			Noise	Provision of acoustic enclosure will be made for D.G.sets as noise control measures	
			Solid Waste Management	Provision of bio-gas generation plant within the site disposal of the bio-degradable solid waste	
			Eco restoration	As part of the eco restoration, large number of saplings of native species would be planted within green area	

2. The proposal was placed in the 60th meeting of SEAC, Kerala, held on 28th and 29th July, 2016. The Committee appraised the proposal based on Form 1, Form I A and conceptual plan. The Committee decided to defer the item for field visit.

Accordingly, the site inspection was conducted on 10.11.2016 by the sub-Committee of SEAC consisting of Sri S Ajayakumar and Sri John Mathai in the presence of the representatives of proponent.

The inspection reported that the project can be recommended after examination of following clarifications:-

1. Modified plan for the entry and exit. Entry to be provided with a bay like structure to ease the traffic on the main road. Exit to be limited to the road on the southern side.
2. Specific details of the quantity of excavation, quantity to be taken out and its use
3. At least five recharge pits to be given within the site. Storm water must be led into these pits to recharge the aquifer and only excess to be drained out
4. Details of maximum use of solar energy with quantity.
5. Details of multi level parking. The ramp slope to be reduced to 1 in 12.5 or lower from 1 in 10 as planned.
6. Provision for green belt all around and by the side of bays. Use of reflective glasses on the exterior walls to be minimised.
7. An additional common assembly point to be provided.

The proponent has submitted clarifications raised during field visit *viz.*, details of assembly point, landscaping, biogas plant and modified plan for the entry and exit.

3. The proposal was placed in the 66th meeting of SEAC held on 19th December, 2016. 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 decided to Recommend for issuance of EC subject to general conditions in addition to the following specific conditions.

1. *Revised entry and exit plan and details of multilevel parking and common assembly points submitted by the proponent shall be strictly adhered to.*
2. *At least five recharge pits to be given within the site. Storm water must be led into these pits to recharge the aquifer and only excess to be drained out.*
3. *Provision for green belt all around and by the side of bays. Use of reflective glasses on the exterior walls shall be as per the relevant provisions of the building code*

The provision for the CSR activities committed by the proponent shall be used for the welfare of the local community in consultation with the local Panchayath.

4. The proposal was considered by the Authority in its 64th meeting held on 23.02.2017. The Authority decided to grant Environmental Clearance subject to the General Conditions in addition to the following specific conditions.

1. *Revised entry and exit plan and details of multilevel parking and common assembly points submitted by the proponent shall be strictly adhered to.*
2. *At least five recharge pits to be given within the site. Storm water must be led into these pits to recharge the aquifer and only excess to be drained out.*
3. *Provision for green belt all around and by the side of bays. Use of reflective glasses on the exterior walls shall be as per the relevant provisions of the building code.*

5. The proponent has submitted the affidavit satisfying the above conditions. Environmental Clearance as per the EIA notification 2006 is therefore granted to the proposed Shopping Mall project at Re-survey Nos. 188/24 & 188/24 p at Ollur Village, Thrissur Corporation, Thrissur Taluk & District, Kerala by Sri.M.A.Mehaboob, M/s HiLITE Mall (Thrissur) LLP subject to the specific conditions mentioned in para 4 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.

6. 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.

7. 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.

8. 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, Thrissur 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.M.A.Mehaboob (Designated Partner), M/s HiLITE MALL (Thrissur) LLP, G-1003, T1, Business Park, HiLITE City, Thondayad Bypass, GA College P.O., Kozhikode, Kerala-673014.

Sd/-
JAMES VARGHESE I.A.S,
Member Secretary (SEIAA)

To,

Sri.M. A. Mehaboob (Designated Partner),
M/s HiLITE MALL (Thrissur) LLP,
G-1003, T1, Business Park, HiLITE City,
Thondayad Bypass, GA College P.O.,
Kozhikode, Kerala-673014

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, Thrissur
4. The District Town Planner, Thrissur
5. The Tahsildhar, Thrisur Taluk, Thrissur
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, Corporation of Thrissur, M.O.Road, Thrissur, Kerala
9. Chairman, SEIAA, Kerala
11. Website
12. Stock file
13. O/c

Forwarded/By Order

Administrator, SEIAA


STATE ENVIRONMENT IMPACT ASSESSMENT AUTHORITY, KERALA
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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

Rajendran

For Member Secretary, SEIAA

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