Validity expires on 13.03.2024

सत्यमेव जयते

Proceedings of the State Environment Impact Assessment Authority Kerala

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

Sub: SEIAA-Environmental clearance for Residential Project in Block No.212 in Re-Survey No. 27, Thiruvalla Village, Thiruvalla Municipality, Thiruvalla Taluk, Pathanamthitta District, Kerala by Sri. Shajith K,M/s Skyline Builders- EC Granted-Orders issued

State Environment Impact Assessment Authority, Kerala

No. 925/SEIAA/ EC4/3891/2015 dated, Thiruvananthapuram.14.03.2017

Ref: 1. Application dated 23-09-2015 from Sri. Shajith.K, (Assistant General Manager), M/s Skyline Builders
2. Minutes of the 57th meeting of SEAC held on 16/17-06-2016.
3. Minutes of the 60th meeting of SEAC held on 28/29-07- 2016
4. Minutes of the 63rd meeting of SEAC held on 04-10-2016
5. Minutes of the 62th meeting of SEIAA held on 23-12-2016

ENVIRONMENTAL CLEARANCE NO.22/2017

Sri.Shajith.K, (Assistant General Manager), M/s Skyline Builders, 41/349 B, Skyline House, Rajaji Road, Cochin, Kerala-682035 vide his application received on 23-09-2015, has sought Environmental Clearance under EIA Notification, 2006 for proposed Residential projectat Block No.212 in Re-Survey No. 27 Village Thiruvalla, Thiruvalla Municipality, Thiruvalla Taluk, Pathanamthitta District, Kerala. It is interalia, noted that the project comes under the category B, 8(a) of Schedule of EIA Notification 2006.

I. Project details		
•	File No.	925 / SEIAA / EC4 / 3891 / 2015
•	Name /Title of the project	Proposed Housing Project by M/s Skyline Builders
•	Name and address of project proponent.	Mr.Shajith K, (Assistant General Manager), M/s Skyline Builders, 41/349 B, Skyline House, Rajaji Road, Cochin, Kerala-682035
•	Owner of the	Private Land

	land	
•	Survey No. District/Taluk/ and Village etc.	Re-survey no. 27, Block No. 212, Thiruvalla Village, Thiruvalla Municipality Thiruvalla Taluk, Pathanamthitta District, Kerala
•	Nature of the proposal – lease or permit with evidence.	Not Applicable
•	Date of submission of Application	22.09.2015
•	Brief description of the project.	Proposed Housing Project Plot area of 0.8090 ha (8,090sq.m.) Total Built-up area = 44,928 sq. m. Total Nos. of Apts. = 203 Apartments
•	Details of Authorized Signatory and address for correspondence	Mr.Shajith K, (Assistant General Manager), M/s Skyline Builders, 41/349 B, Skyline House, Rajaji Road, Cochin, Kerala-682035

II. Land Details

•	a) Extent of area in hectares	Plot area of 0.8090 ha (8,090sq.m.)
•	b) Is the property forest land/Govt. land/own land/patta land	Own Land
•	c) Quantity of top soil/over burden produced and managed	Not Applicable
•	d) Latitude and Longitude	Latitude (N): 9^0 23'12.36" to 9^0 23'7.52" Longitude (E): 76^0 35'8.96" to 76^0 35'5.66"
•	e) Topography of land and elevation	There are some of native species of trees and different varieties of shrubs, herbs, grass & climbers at site.
•	f) Slope analysis	The slope is toward south west direction.
•	g) Will there be any significant land disturbance resulting in	NO

	soil erosion, subsidence & natural drainage.	
•	h) Access road to the site width and condition	The access road to the project site is from 10.5 m. wide, (Thiruvalla – Kozhencherry Road) which is well connected to entire district.
•	i) Will there be any adverse impact on the aesthetics of the proposal site	The surrounding area is residential / offices / institutional developments. The south direction there is access road to the site. Also, there are individual houses with plantations. There will be no any adverse impacts due to the development of the proposed project
	III. Mining details	
•	a) Minimum and Maximum height of excavation.	Not Applicable
•	b) Life of mine proposed.	
•	c) Underground mining if any proposed	
•	d) Method of Mining	
•	e) Distance from the adjacent quarry	
•	f) Cluster condition if any	
•	g) Has "No cluster certificate" submitted?	
•	h) Distance from nearby habitation	
•	i) Distance from nearby forest, if applicable	
•	j) Distance from protected area, Wildlife Sanctuary, National Park etc.	
•	k) Distance from nearby streams/rivers/National Highway and Roads	
•	l) Is ESA applicable? If so distance from ESA limit	
•	m) Has approved mining plan, prepared by RQP submitted?	
•	n) Capacity of production in TPA	
•	o) Details of mining process	
	IV. Details of Project cost	
•	a) Land cost	N.A.
•	b) Plant and Machinery	
•	c) Total Cost	75.5 Crores
•	V. Financial Statement including funding sourceand details of insurance etc.	Source :- Own source & bank loan Insurance :- Insurance to the workers and machinery during construction phase.

• 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 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 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.	
• **VI.** Whether Environment Management Plan or Eco restoration Plan satisfactory?	Yes. Mentioned as Item. No.38		

	Sr. No.	Potential Impact	Action	Parameters for Monitoring
	I. Construction Phase			
• **VII.** Does it suggest mitigation measures for each activity	1.	Air Emissions	All equipments are operated within specified design parameters	Random checks of equipment logs/manuals
			Vehicle trips to be minimized to the extent possible	Vehicle logs
			Any dry, dusty materials stored in sealed containers or prevented from blowing.	Absence of stockpiles or open containers of dusty materials.
			Compaction of soil during various construction activities	Construction logs
			Ambient air quality within the premises of the proposed unit to be monitored.	The ambient air quality will conform to the standards for PM_{10}& $PM_{2.5}$, SO2 and NOx, CO and Pb

2.	Noise	List of all noise generating machinery onsite along with age to be prepared. Equipment to be maintained in good working order.	Equipment logs, noise reading	
		Night working is to be minimized.	Working hour records	
		Generation of vehicular noise	Maintenance records of vehicles	
		Implement good working practices (equipment selection and sitting) to minimize noise and also reduce its impacts on human health (ear muffs, safe distances, and enclosures).	Site working practices records, noise reading	
		No machinery running when not required.		
		Acoustic mufflers / enclosures to be provided in large engines	Mufflers / enclosures in place	
Sr. No.	Potential Impact	Action	Parameters for Monitoring	
		Noise to be monitored in ambient air within the plant premises.	Noise reading	
		The noise level will not exceed the permissible limit both during day and night times.		
		All equipments operated within specified design parameters.	Random checks of equipment logs / manuals	

		Vehicle trips to be minimized to the extent possible	Vehicle logs	
3.	Waste water Discharge	No untreated discharge to be made to surface water, ground water or soil	No discharge hoses in vicinity of watercourses.	
		The discharge point should be selected properly and sampling and analysis should be undertaken prior to discharge	Discharge norms for effluents as given in consent to operate by PCB.	
		Take care in disposal of wastewater generated such that soil and groundwater resources are protected	Discharge norms for effluents as given in consent to operate by PCB	
4.	Soil Erosion	Minimize area extent of site clearance, by staying within the defined boundaries	Site boundaries not extended / breached as per plan document	
		Protect topsoil stockpile where possible at edge of site	Effective cover in place	
5.	Drainage and effluent Management	Ensure drainage system and specific design measures are working effectively. The design to incorporate existing drainage pattern and avoid disturbing the same.	Visual inspection of drainage and records thereof	
6.	Waste Management	Implement waste management plan that identifies and characterizes	Comprehensive waste management plan in place	

		every waste arising associating with proposed activities and which identifies the procedures for collection handling & disposal of each waste arising.	and available for inspection on site. Compliance with MSW Rules, 1998 and Hazardous Waste (Management and Handling Rules), 2003	
7.	Non-routine events and cool dental releases	Plan to be drawn up Considering likely emergencies and steps required to prevent / limit consequences	Mock drills and records of the same	
8.	Environmental Management Cell/Unit	The Environmental Management Cell / Unit is to be set up to ensure implementation and monitoring of environmental safeguards.	A formal letter from the management indicating formation of Environment Management Cell	
II. Operational Phase				
9.	Air Emissions	Stack emissions from DG set to be optimized and monitored	The ambient air quality will conform to the standard for PM_{10}&$PM_{2.5}$, SO2, and NOx, CO as given by PCC.	
		Ambient air quality within the premises of the proposed unit to be monitored. Exhaust from vehicles to be minimized by use of fuel efficient vehicles and well maintained vehicles having PUC certificate.	The ambient air quality will conform to the standards for PM_{10}& $PM_{2.5}$ as given by PCC Vehicles logs to be maintained	
		Vehicle trips to	Vehicle logs	

		be minimized to the extent possible		
10.	Noise	Noise generated from operation of DG set to be optimized and monitored DG sets to generate less than 75 dB(A) Leg at 1.0 m from the source DG sets are to be provided at service building with a acoustic enclosures with height of chimney above roof level or as specified by SPCB	Maintain records of vehicles	
		Generation of vehicular noise	Maintain records of vehicles	
11.	Wastewater Discharge	No untreated discharge to be made to surface water, groundwater or soil,	No discharge hoses in vicinity of watercourses	
		Take care in disposal of wastewater generated such that Soil and groundwater resources are protected	Discharge norms for effluent	
12.	Drainage and effluent Management	Ensure drainage system and specific design measures are working effectively. Design to incorporate existing drainage pattern and avoid disturbing the same.	Visual inspection of drainage and records thereof	

13.	Indoor air contamination	Contaminants such as CO, CO2 and VOCs to be reduced by providing adequate ventilation.	Monitoring of indoor air contaminants such as CO, CO2 and VOCs	
14.	Energy Usage	Energy usage for air-conditioning and other activities to be minimized Conduct annual energy audit for the buildings	Findings of energy audit report	
15.	Emergency preparedness, such as fire fighting	Fire protection and safety measures to take care to fire and explosion hazards to be assessed and steps taken for their prevention.	Mock drill records, on site emergency plan, evacuation plan	
16.	Environment Management Cell/Unit	The Environment Management Cell/Unit to be set up to ensure implementation and monitoring of Environmental safeguards	A formal letter from the management indicating formation of Environment Management Cell	

• **VIII.** If Pre-Feasibility Report (PFR) satisfactory	Not Applicable
• **IX.** Does it need public hearing	Not Applicable
• **X.** Details of litigation and Court verdict if any	Nil
• **XI.** Details of public complaint, if any	Nil
• **XII.** Details of statutory sanction required	All approvals as per local norms related to the projects will be obtained.
• **XIII.**If CRZ	N.A.

	recommendation applicable?	
PART B **Environment Impact Assessment and Mitigation Measures**		
Impact on water		
•	a) Details of water requirement per day in KLD	The total domestic water requirement of about 142 KLD (which includes daily fresh water requirement of about 93 KL). Treated water from STP to be used for flushing of toilets (about 49 KLD) and Horticulture (6 KLD) requirement.
•	b) Water source/sources.	Stored Rain water (Tanks), Wells, KWA water supply and treated water from STP.
•	c) Expected water use per day in KLD.	Daily fresh water requirement of about 93 KL
•	d) Details of water requirements met from water harvesting.	One of the source of water for the proposed project will be water from stored rain water in tanks to be constructed within the site for meeting the water requirement for non-flushing activities. The capacity of the rain water storage tank requirement is = ground coverage of the building x 25 ltr. as per KMBR. The statutory requirement works out to be about 95.554 KL. However, provision is made for storage of 96 KL which is higher to the statutory requirement
•	e) What are the impact of the proposal on the ground water?	Pre-construction Soil Investigation has been carried out for the site. As per the soil investigation report, the ground water table is at about 4.55 m. below the ground level. The source of water for the proposed project will be water from Rain water storage tank for meeting the water requirement during rainy days-concurrent use and stored for non-rainy days and open well at site for meeting the water requirement for non-flushing activities and hence the availability of water is ensured and due to the reasons mentioned above, the dependency on ground water will be minimal
•	f) How much of the water requirement can be met from the recycling of treated waste water? (Facilities for liquid waste treatment)	The proposed project has provision for treatment of sewage. The quantity of treated water from STP which is fit for recycling to meet the flushing requirement (49 KLD) & horticulture (6 KLD) requirement
•	g) What is the incremental pollution load from waste	There would be no incremental pollution load from wastewater generated from the proposed activity because the whole waste water of this project would be treated through proposed S.T.P. within the project area and the

	water generated from the proposed activities?	treated water from S.T.P will be partially re-used and minimal discharge outside the project site. Therefore, minimal impact outside the site
•	h) How is the storm water from within the site managed?	The roof run-off from the site will be appropriately channelised to the storm water collection tank to be constructed within the site and the excess runoff from the site will be properly chanalized to the drain and will be discharged only after de-siltation & oil removal. The contour map showing the natural drainage pattern within the site is provided with the application. The surface runoff will be properly channelized to the after de-silting and oil removal. Sand, gravel & other loose construction materials during rainy days to be kept in a covered or secured place so as to prevent the carrying of these through surface run-off. Proper & regular house keeping of the construction site specially during rainy days & these area to be free of all litters like plastic bottles & carry bags, packaging materials, hand gloves, etc.
	Impact on Biodiversity and Eco restoration Programmes	
•	a) Will the project involve extensive clearing or modification of vegetation (Provide details)	There are some native tree species and different varieties of shrubs, herbs, climbers existing at site. For the development of the proposed project, there will be clearance of the existing trees & different varieties of shrubs, herbs, grass & climbers.
•	b) What ate the measures proposed to minimize the likely impact on vegetation (details of proposal for tree plantation/ landscaping)	It is proposed to have large number of tree plantation (native species) within the project area.
•	c) Is there any displacement of fauna – both terrestrial and aquatic. – If so what are the mitigation measures ? d) Presence of any endangered species or red listed category (in detail)	No. No.
	Impact on Air Environment	
•	a) What are the mitigation measures on generation of dust, smoke and air quality	During construction phase, there will be generation of dust & smoke due to this project. 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
•	b) Details of	The proposed project would provide vehicle parking

	internal traffic management of the site.	facilities within the project premises. The parking plan for this project would follows KMBR guidelines. The total number of parking proposed is 256 Cars + 253 T.W. The conceptual plan clearly shows the internal traffic management with entry and exit to the proposed project site. The proposed site development will provide minimum drive way as per KMBR at all around the building blocks for easy & smooth vehicular movement.
•	c) Details of noise from traffic, machines and vibrator and mitigation measures	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 and the ambient noise level report is attached.
•	d) Impact of DG sets and other equipments on noise and vibration and ambient air quality around the project site and mitigation measures	Noise level monitoring carried out from an approved laboratory at site and report of the same is already submitted.
•	e) Air quality monitoring in detail	The proposed project is housing 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 and the ambient air quality report is attached along with the application.
	Energy Conservation	
•	a) Details of power requirement and source of supply.	Total Power Requirement : 1,200 kW Source : KSEB & D. G. Sets (200 kVA x 2 nos. as back-up)
•	b) Details of renewable	Solar water heating system for the hot water requirement and solar power operated street lights.

	energy (non – conventional) used.	
	Risk Management	
•	a) Are there sufficient measures proposed for risk hazards in case of emergency such as accident at the site?	The project is a residential project. The chances of explosions, spillages, fire are minimal. During construction all the labours will be provided with suitable personal protective equipment (PPE) as required under the health & safety norms. Training and awareness about the safety norms will be provided to all supervisors and labours involved in construction activity. An agreement will be signed with the contractor which will clearly deals with the safety aspects during construction. No major hazardous waste is being stored within the project site. No Industrial or process activity is involved in this project hence chances of chemical hazards and accidents are minimal. However, suitable fire fighting measures will be provided.
•	a) Are proposals for fencing around the quarry satisfactory?	NA
	b) Storage of explosives/hazardous substance in detail	NA
	c) Facility for solid waste management	The proposed project will generate about 406 Kg/day from the proposed project. The solid waste from the proposed project will be segregated into two categories at source itself as per Municipal Solid Waste Rules, 2000 by providing appropriate colored bins i.e., Bio-degradable (green bins) & non-biodegradable (blue bins). The biodegradable waste would be sent to the bio-gas generation plant
	Socio Economic Impacts	
•	a) Will the project cause adverse effects on local communities disturbance to sacred sites or other cultural values. What are the safe guards proposed?	The project would not cause any adverse effects on local communities, disturbance to sacred sites or other cultural values. The proposed project is a multistoried apartment project and thereby the living index of the people around the project site will definitely improve. Also there will be various ancillary activities like convenient shops, transport facilities etc. attached to the project which will benefit the local people and change their living condition
•	b) Will the proposal result in any changes to	The proposed project is a housing project. During operation phase, on full occupancy of the project, the maximum population expected is 1,015 persons (residents) and hence there will be influx of people (fixed) to the project area and surrounding

	the demographic structure of local population. If so, provide details.	
•	c) Are the CSR proposals satisfactory. Give details	**Proposed common CSR Budget** **Sl.No.** / **Particulars** / **Amount Rs. In lakhs** 1. / The project proponent has earmarked an amount for CSR Activities / Rs. 10 Lakhs (Non-recurring) Rs. 15 Lakhs (Recurring)
•	d) What are the projects benefits in terms of employment potential?	During construction skilled, unskilled and professional work force including temporary and permanent employees shall be hired locally in order to generate the employment to the local people. While during the project operation stage for the purpose of day-to-day maintenance, workers will be employed. Moreover, more employment will be created as a result of positive induced development in the immediate vicinity of project site.
	PART C	
•	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, JanakPuri, New Delhi. *Branch Office:-* C-306, Kanchanjunga Apartments, Palarivattom P.O., Kochi, Kerala.
	Summary and Conclusion	
•	a) Overall justification for implementation of the project.	Proposed Housing Project Plot area of 0.8090 ha (8,090sq.m.) Total Built-up area = 44,928 sq. m. Total Nos. of Apts. = 203 Apartments
•	b) Explanation of how adverse impact have been mitigated.	The surrounding area is residential / offices / institutional developments. The south direction there is access road to the site. Also, there are individual houses with plantations. There will be no any adverse impacts due to the development of the proposed project.

2. The height of the proposed building is 78.95 m and the total plot area of the proposed project is 8,090 m2 and the total built-up area is 44,928 m2. The total power requirement is 1,200 KW which will be sourced through Kerala State Electricity Boards Renewable energy devices used are solar water heater ad solar operated street lights. The

total project cost is Rs.75.5 crores. 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.

3. The proposal was placed in the 57th meeting of SEAC held on 16th& 17th June 2016. The Committee deferredthe item for site inspectionand the production of detailed sketch showing the provision for waste storage and disposal.

Field visit to the above project site was carried out on 21.06.2016 by the sub-committee of SEAC, Kerala, comprising Sri. Ajaya Kumar and Sri. John Mathai. Waste management at the site, excess treated waste water into the open drain, storm water management, component of RWH, dependable source of water, parking provisions etc were examined.

Following points may be considered before recommending the project.

1. *Considering the general slope of the site towards main road and in the absence of open drain on the road side, storm water management plan need modification. The storm water should be directed to deep pits to be taken inside the project area. By providing proper filtration mechanism, these pits can serve as RWH structure.*
2. *The details of excavation with quantity should be provided with section and plan.*
3. *Though it is planned to develop water sources at the site, it is essential that RWH facility to be enhanced to 870 KL being 10 days daily requirement.*
4. *Mechanism for waste treatment and disposal was explained. Treated water should not be let into the road. Zero discharge should be achieved.*
5. *Maximise use of solar energy. The detailed plan with quantity to be given.*
6. *Source of water is reported as large diameter wells in the site. Dependable yield with yield test to be provided. The location of the wells should be away from the STP treatment facility.*

4. The Committee in its 60th meeting held on 28th and 29th July, 2016 deferred the item for the submission of following clarifications.

1. The details of excavation with quantity should be provided with section and plan
2. Maximise use of solar energy; the detailed plan with quantity to be given.
3. Source of water is reported as large diameter wells in the site. Dependable yield with yield test to be provided. The location of the wells should be away from the STP treatment facility.

5. 63rd meeting of SEAC held on 04-10-2016 appraised the proposal based on the Form I, Form IA and all other documents submitted along with the application and site inspection report. The Committee decided to Recommend for issuance of EC subject to the general conditions along the specific condition that- the storm water, after providing proper filtration mechanisms, shall directed to deep pits inside the project area which can serves as RWH structure. The deep pits should have a minimum capacity of 900 KL.

6. The Authority in its 62nd meeting held on 23-12-2016 decided to grant EC with the above specific conditions in addition to the general conditions subject to the production of an affidavit that all the general and specific conditions shall be strictly implemented and the earmarked CSR activities shall be undertaken.

1. The storm water, after providing proper filtration mechanisms, shall directed to deep pits inside the project area which can serves as RWH structure.
2. The deep pits should have a minimum capacity of 900 KL

7. The Proponent has submitted the affidavits stating that theall the general and specific conditions shall be strictly implemented and the earmarked CSR activities shall be undertaken. The Proponent agreed to spend Rs.10 lakh (Non-Recurring) and Rs.15 lakh (Recurring) for CSR activities. Environmental clearance as per the EIA notification 2006 is hereby accorded for the proposed Residential project in Block No.212 in Re-Survey No. 27 ThiruvallaVillage, Thiruvalla Municipality, ThiruvallaTaluk, Pathanamthitta District, Keralaby Sri. Shajith.K, (Assistant General Manager), M/s Skyline Builders, 41/349 B, Skyline House, Rajaji Road, Cochin, Kerala-682035subject to the specific conditions mentioned in para6 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.

7. 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.

10. 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.

11. 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, Pathanamthitta 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. Shajith.K, (Assistant General Manager), M/s Skyline Builders, 41/349 B, Skyline House, Rajaji Road, Cochin, Kerala-682035.

Sd/-
V.S.SENTHIL.I.A.S,
Member Secretary (SEIAA)

To,

Sri.Shajith.K, (Assistant General Manager),
M/s Skyline Builders, 41/349 B, Skyline House,
Rajaji Road, Cochin, Kerala-682035.

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, Pathanamthitta
4. The District Town Planner, Pathanamthitta
5. The Tahsildhar, Thiruvalla Taluk, Pathanamthitta
6. The Member Secretary, Kerala State Pollution Control Board
7. The Director, Dept. of Environment and Climate Change, Govt. of Kerala, Tvm-24

8. Chairman, SEIAA, Kerala
9. Website
10. 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

Rajendran

For Member Secretary, SEIAA