सत्यमेव जयते

Validity expires on 04/02/2023

Proceedings of the State Environment Impact Assessment Authority Kerala

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

Sub: SEIAA- Environmental clearance for the proposed Granite Stone Quarry project in survey Nos. 417/3, 417/5, 417/7, 417/8, 416/1, 416/5(Pt), of Elanji Village, Muvattupuzha Taluk, Ernakulam District, Kerala by Sri K.I.Paulose, Managing Director, M/s Luxury Sand Kerala Pvt. Ltd - granted – Orders issued.

STATE ENVIRONMENT IMPACT ASSESSMENT AUTHORITY, KERALA

No. 1124/ EC/SEIAA/KL/2017 ***Dated,Thiruvananthapuram 05/02/2018***

Ref:
1. Application dated 25.01.2017 from Sri.K.I.Paulose, Managing Director, M/s.Luxury Sand Kerala Private Limited
2. Minutes of the 73rd meeting of SEAC held on 30th& 31st May 2017.
3. Minutes of the 79th meeting of SEAC held on 25th & 26th September 2017.
4. Minutes of the 75th meeting of SEIAA held on 28.10.2017.
5. Minutes of the 78th meeting of SEIAA held on 15th December 2017.
6. Affidavit received on 12/1/2018 from Sri.K.I.Paulose, Managing Director & Authorised Signatory of M/sLuxury Sand Kerala Pvt Ltd.

ENVIRONMENTAL CLEARANCE NO.18/2018

Sri K.I.Paulose, Managing Director, M/s Luxury Sand Kerala Pvt. Ltd, Elanji Village, MuvattupuzhaTaluk, Ernakulam District, Kerala 682 316,vide his application submitted on 25th January 2017 has sought Environmental Clearance under EIA Notification, 2006 for the quarry project in survey Nos. 417/3, 417/5, 417/7, 417/8, 416/1, 416/5(Pt) of Elanji Village, Muvattupuzha Taluk, Ernakulam District, Kerala for an area of 5.5300 Ha. The project comes under Category B, Activity 1(a), (i) as per the Schedule of EIA Notification 2006 (since it is below 50 hectares) and as per O.M. No. L-11011/47/2011-IA.II (M) dated 18th May 2012 of Ministry of Environment and Forests. It is further categorized as Category B2

as per Notification No.S.O.141 (E) dt.15.01.2016 of Ministry of Environment and Forests, since the area of the project is below 25 hectares.

Details of the project as furnished by the Applicant are as follows:

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

PROJECT DETAILS	
File No.	**1124/EC/SEIAA/KL/2017**
Name /Title of the project	Granite Building Stone Quarry of M/s. Luxury Sand Kerala Private Limited
Name and address of project proponent.	Sri. K.I. Paulose – Managing Director Kavikunnel House, Kunnackal P.O., Muvattupuzha Taluk, Ernakulam District, Kerala. Pincode: 682316 Mobile: 9496339155 E.mail: luxurysandkeralapvtltd@gmail.com
Owner of the land	The entire mine lease area of 5.5300 Ha. is a private patta land possessed to M/s. Luxury Sand Kerala Private Limited.
Survey No. District/Taluk/ and Village etc.	Survey Nos: 417/3, 417/5, 417/7, 417/8, 416/1 & 416/5(Pt) Village, Muvattupuzha Taluk, Ernakulam District, Kerala.
Category/Sub Category and Schedule	Schedule No. – 1(a) Category – B, Sub-category – B2
Details of period of lease or permit with number including the beginning and expiry date of lease/permit period (Copy to be attached)	The lease deed was executed on 2nd February 2006 valid up to 1st February 2018 and is under operation since then (Enclosure -1).
Present Status of the project	The SEAC Committee decided to" Recommend for issuance of EC" subject to the general conditions in the Minutes of the 79th meeting of SEAC held on 25th& 26th September 2017.
Date & Year of starting the work of the quarry project.	2nd February 2006
Whether the quarry is working at present or not ?	Yes
If stopped working since when?	Not applicable
Date of submission of Application	25th January 2017

Brief description of the project.	The project comprises of private land possessed in the name of Mr. K I Paulose, Managing director, Luxury Sand Kerala Private Limited and is for operating a granite building stone quarry. The working will be done through semi-mechanized open-cast mining method. The project is under category-B2.
GPS Co-ordinate	Latitude (N) - 09°51'11.60" N to 09°51'27.70" N
	Longitude(E) - 76°32'39.00" E to 76°32'49.40" E
Details of Authorized Signatory and address for correspondence	Sri. K.I. Paulose – Managing Director Kavikunnel House, Kunnackal P.O., Muvattupuzha Taluk, Ernakulam District, Kerala. Pincode: 682316 Mobile: 9496339155
LAND DETAILS	
Extent of area in hectares	5.5300 Ha
Is the property forest land/Govt. land/own land/patta land	Private Own Land
Quantity of top soil/over burden produced and managed	The total quantity of the waste to be generated from the mine area is expected to be 6989.36 m^3 which comprising of top soil and overburden / waste. Topsoil will be used for plantation purposes. Small quantity of waste material to be generated will be used for road formation, filling low lying areas and as such there may not be any waste storage in this lease area.
Latitude and Longitude	Latitude (N) - 09°51'11.60" N to 09°51'27.70" N Longitude (E) - 76°32'39.00" E to 76°32'49.40" E
Topography of land and elevation	TOPOGRAPHY- The quarry lease covers portion of western slopes and hill top, on NW - SE extending elevated terrain. Most of the area is sloping westerly except the top where already quarrying in being done. ELEVATION- 65m AMSL and 172m AMSL
Slope analysis	The bench slopes will be maintained as per DGMS rules and requirement and hence there cannot be any instable slopes.
Will there be any significant land disturbance resulting in soil erosion, subsidence & natural drainage.	No.This being an opencast mine there will not be any subsidence. The bench slopes will be maintained as per DGMS rules and requirement and hence there cannot be any instable slopes. There will be land disturbance due to mining activity.
Access road to the site width and condition	7 m wide, tarred road
Will there be any adverse impact on the aesthetics of the proposal site	No.

MINING DETAILS	
Minimum and Maximum height of excavation.	Highest 172 m above MSL Lowest 65 m above MSL
Life of mine proposed.	12 years
Underground mining if any proposed	No
Method of Mining	Semi-Mechanized Open cast
Distance from the adjacent quarry	Nil within 500m
Cluster condition if any	The total quarrying area along with the Granite Building Stone quarry of M/s. Luxury Sand Kerala Private Limited within 500m will be 5.5300 Ha only.
Has "No cluster certificate" submitted?	Yes. No quarries are functioning within the 500m radius of this quarry and in this regard a certificate is obtained from the District Geologist, Ernakulam, vide No. DOE/3593/E2/16 dated 03.01.2017
Distance from nearby habitation	173m away
Distance from nearby forest, if applicable	Nedumala Reserve Forest - 14 km (NE)
Distance from protected area, Wildlife Sanctuary, National Park etc.	Nil within the 10 km study area
Distance from nearby streams/rivers/National Highway and Roads	Muvattupuzha River - 6 km (W) & Canal - More than 100 m
Is ESA applicable? If so distance from ESA limit	No
Has approved mining plan, prepared by RQP submitted?	Yes
Capacity of production in TPA	150335 TPA
Details of mining process	• Presently Semi-mechanized opencast quarrying is adopted for exploiting the granite rocks which will be continued in future also. The mining operation comprises of drilling using jack hammer and compressors, blasting, removal of blasted material using excavator and transportation of material directly to the own crusher unit located outside the lease area. • The bench height will be maintained at 5 m ultimately. • The blasting design system is and will be properly planned with ideal spacing and burden patterns, ensuring appropriate

	stemming column and reduced optimized explosive charge, so that ground vibratory effects, fly rocks, etc., are properly regulated and controlled.	
DETAILS OF PROJECT COST		
Land cost	40 lakhs.	
Plant and Machinery	40.2 lakhs.	
Total Cost	80.2 lakhs(All inclusive).	
Financial Statement including funding sourceand details of insurance etc.	Own fund. Labour insurance is arranged through insurance agency.	
Environment Management Plan	Air Pollution	In the existing mine workings, the following measures are being adopted to control impact on the air quality in the area: ➢ Covering of drill holes with wet cloth for controlling dust emission. ➢ Usage of sharp drill bits for drilling of holes. ➢ Regular wetting of transport road using water tanker for Dust suppression. ➢ Proper maintenance of transport road. ➢ Fixed swelling type water sprinkling arrangement has been provided. ➢ Well-designed blast by effective stemming. Every blast is properly designed to see that the optimum breakage occurs without generating fines. ➢ Avoiding blasting during high wind periods where the fine dust is carried out away easily affecting the ambient air quality. ➢ Proper maintenance of hauling equipment's. ➢ Regular maintenance of the transport vehicles. ➢ Avoiding of overloading of tippers and covering of loaded tippers with tarpaulins during transportation. ➢ Development of Greenbelt. ➢ Periodical monitoring of air quality to take steps to control the pollutants. Besides, the own crusher located outside is also provided with the following mitigative

		measures: ➢ Fixed Water sprinkling system at transfer points to control dust emission. ➢ Enclosing of all the belt conveyor. ➢ Collection of the material in the bin and discharging the same to chutes Maintenance of greenbelt all around the working areas to screen the noise and also for arresting fugitive dust.
	Water Pollution	➢ In case of this quarry is concerned, the total quantity of domestic effluent generated from the project will be around 1.0 m^3/day. For domestic effluent, septic tank with soak pits are provided. ➢ To maintain proper drainage arrangements, in the initial years itself, garland drains shall be laid in the south western part of the lease area. This will be connected to the RWH/settling pond on the south west corner of the lease area. The rain water falling in the quarry will pass through the drains, settling tank and supernatant clear water can be let out of this pond after passing through settling traps.
	Noise	➢ Use of controlled blasting techniques to keep the noise as well as vibration level within the prescribed limits. ➢ Proper maintenance of HEMM which avoids excessive noise and vibration ➢ Acoustic enclosures for operator cabin. ➢ Planting of trees around the lease area, in the nearby land owned by the lessee and wherever possible to act as acoustic barriers. ➢ Sound proof operator's cabin for equipment's like dumpers, shovel,Tippers,etc. ➢ Proper and regular maintenance of equipment's may lead to less noisegeneration. ➢ Providing in-built mechanism for reducing sound emissions. ➢ Providing earplugs, earmuffs to workers exposed to higher noise level.
	Solid Waste	The eastern side of the lease area is already

	Management	broken up and quarrying is being done. Only few portion of Southern side and north western side of the lease area is virgin land. Only southern side covered with soil and some overburden. Hence the total quantity of the waste to be generated from the mine area is expected to be 6989.36 m^3 which comprising of top soil and overburden / waste. Since the mining activities for the present lease period will be confined within the already worked out mined area there will not be any topsoil/waste generation during the present lease period. The available top soil/ waste will be removed only during the next plan period which will be after renewal of the mining lease. About 17473 T of top soil/ waste will be removed only during the conceptual period (after the present lease period). Topsoil will be used for plantation purposes. Small quantity of waste material to be generated will be used for road formation, filling low lying areas and as such there may not be any waste storage in this lease area.
	Eco-restoration	In final mine closure stage, the entire mined out area of 3.8700 Ha can be reclaimed back with bench plantation. As such there will not be any water body. Besides, 1.0796 Ha of safety area can also be development with plantation/bench plantation. Plantation can also be carried out within the lease in the undisturbed areas. The mined area will be properly fenced all around as safety measures.
Whether Environment Management Plan or Eco restoration Plan satisfactory?	Yes	
Does it suggest mitigation measures for each activity	Yes	
Is Pre-Feasibility	Yes	

Report (PFR) satisfactory	
Does it need public hearing	No
Details of litigation and Court verdict if any	No litigation is pending against the project
Details of public complaint, if any	No
Details of statutory sanction required	Environmental clearance yet to be obtained.
If CRZ recommendation applicable?	No
PART B ENVIRONMENT IMPACT ASSESSMENT AND MITIGATION MEASURES	
Details of water requirement per day in KLD	The water requirement for the mining operation is about 8.2 KLD.
Water source/sources.	Bore well and Mine sump of the existing quarry.
Expected water use per day in KLD.	For Domestic& sanitary needs-1.2 KLD and for Dust suppression, plantation etc., - 7.0 KLD
Details of water requirements met from water harvesting.	• To maintain proper drainage arrangements garland drains shall be laid in the south western part of the lease area. This will be connected to the RWH/settling pond on the south west corner of the lease area. • The rain water falling in the quarry will pass through the drains, settling tank and supernatant clear water can be let out of this pond after passing through settling traps.
What are the impact of the proposal on the ground water?	The domestic water needs are met from the bore well and the industrial water is met from the mine sump of the existing quarry. Moreover, mining operation require very less quantity of water and as such its impact on water environment is negligible.
How much of the water requirement can be met from the recycling of treated waste water? (Facilities for liquid waste treatment)	This is a mining project and there is no generation of liquid effluent.
What is the incremental pollution load from waste water generated from the proposed activities?	There will not be any effluent generated from this mine. Hence, not applicable.
How is the storm	Rainwater falling in the quarry will be collected in the sump and

water from within the site managed?	will be advantageously utilized for dust suppression, afforestation etc.
IMPACT ON BIODIVERSITY AND ECO RESTORATION PROGRAMMES	
Will the project involve extensive clearing or modification of vegetation (Provide details)	Major part of the lease area is already mined and exposed with rocks whereas the remaining areas are virgin with local vegetation and mining related infrastructures, which has to be removed before mining.
What ate the measures proposed to minimize the likely impact on vegetation (details of proposal for tree plantation/ landscaping)	It is proposed to develop green belt to about 80 % which includes areas like along mine lease boundary (7.5 m width), all along the periphery of the mine lease area and the reclaimed area. Grass and bushes will be planted in areas prone to erosion especially at the foot of the mine lease area. Other areas will be fertilized and planted with local species. The characteristics of this vegetation will resemble that of the natural environment.
Is there any displacement of fauna – both terrestrial and aquatic? – If so what are the mitigation measures? Presence of any endangered species or red listed category (in detail)	No. This region does not have any endemic or endangered species, so any development activity in the region does not have any direct bearing or significant influences in the ecosystem stability or biodiversity
IMPACT ON AIR ENVIRONMENT	
What are the mitigation measures on generation of dust, smoke and air quality	The sources of impacts on air environment due to quarry operation are mentioned below. 1. Drilling by jack hammer 2. Blasting operation 3. Movement of HEMM. 4. Loading & Unloading operation In the existing mine workings, the following measures are being adopted to control impact on the air quality in the area: 1. Covering of drill holes with wet cloth for controlling dust emission 2. Usage of sharp drill bits for drilling of holes. 3. Regular wetting of transport road using water tanker for Dust suppression. 4. Proper maintenance of transport road. 5. Fixed swelling type water sprinkling arrangement has been provided. 6. Well-designed blast by effective stemming. Every blast is properly designed to see that the optimum breakage occurs without generating fines.

	7. Avoiding blasting during high wind periods where the fine dust is carried out away easily affecting the ambient air quality. 8. Use of controlled blasting techniques to keep the noise as well as vibration level within the prescribed limits. 9. Proper maintenance of HEMM which avoids excessive noise and vibration 10. Acoustic enclosures for operator cabin. 11. Imparting sufficient training to operators on safety and environmental parameters 12. Proper maintenance of hauling equipment's 13. Regular maintenance of the transport vehicles. 14. Avoiding of overloading of tippers and covering of loaded tippers with tarpaulins during transportation. 15. Development of Greenbelt. 16. Periodical monitoring of air quality to take steps to control the pollutants. Besides, the own crusher located outside is also provided with the following mitigative measures: ➢ Fixed Water sprinkling system at transfer points to control dust emission. ➢ Enclosing of the entire belt conveyor. ➢ Collection of the material in the bin and discharging the same to chutes ➢ Maintenance of greenbelt all around the working areas to screen the noise and also for arresting fugitive dust. Due to adoption of all these measures, no significant adverse impact on air quality has been observed. This is amply corroborated from the evaluation of the results of the environmental monitoring of air quality undertaken in the mine area and nearby villages.
Details of internal traffic management of the site.	The entire quarried stone from this lease is directly dispatched to own crusher unit located just outside the lease area in western side. Hence no internal traffic management in the site is needed.
Details of noise from traffic, machines and vibrator and mitigation measures	Noise/Vibration generation in mining operations are mainly due to: • Mechanization adopted. • Drilling & Blasting Operation. • Movement of Vehicles, etc. • Ground Vibration <u>Measures for noise control:</u> ❖ Planting of trees wherever possible to act as acoustic barriers. ❖ Sound proof operator's cabin for equipment like dumpers, shovel, tippers,etc. ❖ Proper and regular maintenance of equipment may lead to less noise generation.
Impact of DG sets and other equipments on noise and vibration and ambient air quality around the project site and mitigation measures	

	❖ Providing in-built mechanism for reducing sound emissions. ❖ Providing earplugs, earmuffs to workers exposed to higher noise level. ❖ Conducting regular health check-up of workers including Audiometry test for the workers engaged in noise prone area. <u>Measures for Ground Vibration:</u> ❖ Optimum design for burden and spacing. ❖ Inclined drilling practice, whenever necessary. ❖ Reducing explosive charge to minimum. ❖ Proper deck charging practices, looking to consolidation and hardness of strata conditions. ❖ Using ordinary millisecond delay detonators, in combination with detonating fuse etc. This sequence of blasting reduces vibration to a large extent, thereby minimizing propagation of shock waves. ❖ Avoiding blasting in unfavorable weather condition.
Air quality monitoring in detail	❖ AAQ monitoring were studied in 3 locations. ❖ PM_{10} values were in the range of 48.5 -73.9 $\mu g/m^3$. ❖ $PM_{2.5}$ values were in the range of 20.7 to 34.0 $\mu g/m^3$. ❖ SO_2 levels were ranging from 3.1 to 4.9 $\mu g/m^3$. ❖ NO_x levels were ranging from 7.1 to 9.5 $\mu g/m^3$. While comparing with the NAAQ Norms, all monitored $PM_{2.5}$, SO_2, NO_x, values were found to be well within the respective limit values of 100 $\mu g/m^3$, 60 $\mu g/m^3$, 80 $\mu g/m^3$ and 80 $\mu g/m^3$ respectively. ❖ The CO values in the all locations found to be below detectable limit of 1144 $\mu g/m^3$. ❖ All monitored values were found to be well within the prescribed NAAQ limits
ENERGY CONSERVATION	
Details of power requirement and source of supply.	No electricity is needed for quarry operations as only diesel operated mining machinery are used for quarrying. Hence the negligible power requirement of the administrative buildings etc., are met from KSEB.
Details of renewable energy (non – conventional) used.	Not Applicable
RISK MANAGEMENT	
Are there sufficient measures proposed for risk hazards in case of emergency such as accident at the site?	• Yes. Bench height, width and slope will be maintained as per direction of DGMS. • The mined area will be properly fenced all around to prevent fall of animals. • Presently magazine is available inside the lease area. Necessary permission from Deputy Chief Controller of Explosives, Ernakulum obtained vide Explosive License
Are proposals for fencing around the	

quarry satisfactory? Storage of explosives/hazardous substance in detail Facility for solid waste management	No: E/SC/KL/22/724 (E31846) Dated: 01.05.2014, which is valid up to: 31.03.2019.During the course of mining in the existing magazine area, it will be shifted after obtaining necessary permission from the concerned authorities. • The total quantity of the waste to be generated from the mine area is expected to be 6989.36 m^3 which comprising of top soil and overburden / waste.Topsoil will be used for plantation purposes. Small quantity of waste material to be generated will be used for road formation, filling low lying areas and as such there may not be any waste storage in this lease area.

SOCIO ECONOMIC IMPACTS

Will the project cause adverse effects on local communities disturbance to sacred sites or other cultural values. What are the safe guards proposed?	No.
Will the proposal result in any changes to the demographic structure of local population. If so, provide details.	No.

Details of CSR commitment

CSR activities already carried out		
Sl.No.	Particulars	Rs in lakhs
1	Extending medical aid, education, sports activities of social clubs to poor people in the surrounding unit	2.0
2	Providing fund and donation to local committee, temples in the surrounding locality during festival time	2.05
3	Providing fund for needy people education, medical treatment, providing building material for construction of their house etc.	1.0
Total		5.05

Proposed CSR Budget		
Sl. No.	Particulars	Rs in lakhs
1	Educational Institutions	9.4
2	Health Institutions	4.26
3	Elanji Grama Panchayat and other local Self-Government Institutions	8.35

	4	Housing Support and other Philanthropic activities for Economically Backward	3.5
		Total	25.51
What are the projects benefits in terms of employment potential?	Presently, more than 18 persons find direct employment in the quarry and crusher operations. Indirectly, more people get employed in various project and allied services like logistics, loading, green belt creation, miscellaneous services etc.		
PART C			
Details of NABET approved EIA Consultant engaged- Their name, address and accreditation details	CREATIVE ENGINEERS & CONSULTANTS, 9/4b, Bharathwajar Street, East Tambaram, Chennai – 600 059. Ph – 044 – 22395170 Mobile : 9444133619 Email – cecgiri@yahoo.com (Serial No. 29 in the list of QCI/NABET Accredited EIA consultant organizations dated September 05, 2017)		
SUMMARY AND CONCLUSION			
Overall justification for implementation of the project.	❖ The final product from the quarry is used in own crusher unit located outside the lease area for producing aggregates which is an essential supply component in road making, construction activities and building works, which are all core sectors for infrastructural growth of the country. ❖ Under CSR initiatives, proponent has already spent around Rs. 5.05 lakhs for various activities like providing fund to local needy poor persons for Educational aid, Medical aid, etc. For future CSR activities, Rs. 5.0 lakhs per year is allocated. ❖ Working of this quarry will result in overall development of the region in its own way due to provision of direct & indirect employment, improvement in the general living standards and knowledge sharing, improved wage level and the living standard of the local people and continual improvements of the local amenities for the local society. ❖ It is predicted that socio-economic impact due to this project will positively bring prosperity and improvements in physical and social infrastructure in the area. It will increase the chance of more employment to local people. There is no resettlement and rehabilitation involved in this project. Revenue of the state government and central government will be increased through collection of various taxes. ❖ The entire project area is devoid of any endangered flora and fauna. It is proposed to reclaim the land to a maximum possible extent by providing green belt in refilling and surrounding areas.		
Explanation of how adverse impact have been mitigated.	The mitigation measures to control the adverse impact due to this project on various environmental factors are explained in Part B above.		

2. The proposal was placed in the 73rd meeting of SEAC held on 30th& 31st May 2017. The Committee appraised the proposal based on the Mining Plan, Pre-feasibility Report and all other documents submitted along with Form1. The proponent agreed to set apart Rs.5 lakh (non-recurring) and Rs.10 lakh per annum (recurring) for CSR activities for the welfare of the local community in consultation with the local body. The Committee decided to defer the item for field inspection.
Accordingly the site visit was conducted by the Sub Committee consisting of Dr. E A Jayson& Dr. K.G.Padmakumar on 01. 09.2017. The report is as follows;

- *The nearest forest is Nedumala Reserve Forest, located about 14 km North- East.*
- *The nearest habitation is at more than 173 m away from the project site.*
- *Nearest river is Muvattupuzha River, at 6 km (W) .*
- *An irrigation canal is at distance more than 100 m, separated from the quarry by a canal road, maintained also in good condition.*
- *No other quarry operating within 500m.*
- *This is a working quarry operating based on valid lease, also with a crusher unit.*
- *The lease got executed in February 2006, valid up to 1 February 2018.*
- *The eastern side of the lease area is already broken up and quarrying is done.*
- *The quarry, neatly maintained, quarrying followbenching, good facilities for labour accommodation and vehicle movement , entry / exit etc.*
- *A garland drain on the border, well maintained through which sediment water is drawn to a settling pond through an aqueduct over the existing canal from where clean water is allowed to flow out.*
- *The CSR suggested has been agreed to.*
- *Quality of outflow water shall be ensured.*

Can be recommended for clearance

3. The proposal was placed in the 79th meeting of SEAC held on 25th & 26th September 2017.Based on the Mining plan, Form.1, all other documents submitted with the proposal and the field visit report, the Committee decided to Recommend for issuance of EC subject to the general conditions in addition to the following specific condition.

1) *If any rare, endemic and threatened plant species are noticed, they shall be properly protected insitu or transplanted to a suitable site inside the lease area.*

The proponent agreed to set apart Rs.5 lakh (non-recurring) and Rs. 10 lakh per annum (recurring) for CSR activities for the welfare of the local community in consultation with the local body.

4. The proposal was placed in the 75th meeting of SEIAA held on 28.10.2017. As the Project proponent has recorded in the signed document that the quarry is operational for an area of 5.5300 ha on lease before 2012 without EC, Authority decided to ask an explanation from the proponent why violation proceedings should not be initiated against the functioning of the quarry. The proponent has submitted an explanation on 06.11.2017 in which he stated that the operation of the quarry is based on a quarrying lease issued on 02.02.2006 before the EIA Notification 2006 which was published on 14.09.2006. Environmental Clearance as contemplated by Notification dated 14.09.2006 required environmental clearance for new projects/activities and hence the quarrying operation does not fall under the scope of violation.

5. The proposal was again considered in the 78th meeting of SEIAA held on 15th December 2017. Since the quarrying lease is issued before the EIA Notification 2006, Authority accepted the recommendation of SEAC and decided to issue EC subject to general condition in addition to the following specific conditions.

1) *If any rare, endemic and threatened plant species are noticed, they shall be properly protected insitu or transplanted to a suitable site inside the lease area.*

2) *All Pre Mining conditions should be fulfilled before mining*

The proponent should set apart Rs.5 lakh (non-recurring) and Rs. 10 lakh per annum (recurring) for CSR activities for the welfare of the local community in consultation with the local body. The CSR amount should be included in the annual account of the company and the expenditure statement should be submitted to SEIAA along with the compliance report after getting certified by a Chartered Accountant. A notarised affidavit for the commitment of CSR activities and also agreeing all the general and specific conditions should be submitted before the issuance of EC. The proponent has submitted an affidavit vide reference 6th cited, satisfying all the above conditions.

6. Environmental clearance as per the EIA notification 2006 is hereby accorded for the proposed building stone quarry project of Sri K.I.Paulose, Managing Director, M/s Luxury Sand Kerala Pvt. Ltd, Elanji Village, Muvattupuzha Taluk, Ernakulam District, Kerala 682 316 ,vide his application submitted on 25th January 2017 for the quarry project in survey Nos. 417/3, 417/5, 417/7, 417/8, 416/1, 416/5(Pt), of Elanji Village, Muvattupuzha Taluk, Ernakulam District, Kerala for an area of 5.5300 hectares subject to the specific conditions as recommended by SEIAA in para 5th above, all the environmental impact mitigation and management measures undertaken by the project proponent in the Form I, EMP, PFR and Mining plan submitted to SEIAA. The assurances and clarifications given by the proponent will be deemed to be a part of these proceedings as if incorporated herein. Also the general conditions for projects stipulated for mining (items 1 to 61), appended hereto will be applicable and have to be strictly adhered to.

7. The clearance issued will also be subject to full and effective implementation of all the undertakings given in the application form, mitigation measures as assured in the Environment Management Plan and the mining features including progressive mine closure plan as submitted with the application and relied on for grant of this clearance. The above undertakings and the conditions and the undertakings in Chapter 4 (Mining), Chapter 5 (Blasting), Chapter 11 (EMP) & Chapter 12 (Progressive Mine Closure Plan) of the Mining Plan as submitted will be deemed to be part of this proceedings as conditions as undertaken by the proponent, as if incorporated herein.

8. Validity of the Environmental Clearance will be five years from the date of this clearance, 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 conditions or genuine complaints from residents within the security area of the quarry.

9. Compliance of the conditions herein will be monitored by the State Environment Impact Assessment Authority or its authorised offices and also by the regional office of the Ministry of Environment & Forests, Govt. of India, Bangalore.

i. Necessary assistance for entry and inspection should be provided by the project proponent and those who are engaged or entrusted by him to the staff for inspection or monitoring.

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

iii. The given address for correspondence with the authorised signatory of the project is Mr. K.I.Paulose, Managing Director, Kavikunnel House, Kunnackal.P.O., Muvattupuzha Taluk, Ernakulam District, Kerala – 682 316.

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

To,

Mr. K.I.Paulose,
Managing Director,
Kavikunnel House,
Kunnackal.P.O.,
Muvattupuzha Taluk,
Ernakulam District, Kerala – 682 316.

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, Government of Kerala.
3. The Director, Mining & Geology, Thiruvananthapuram -4.
4. The Member Secretary, Kerala State Pollution Control Board
5. The District Collector, Ernakulam
6. The District Geologist, Ernakulam
7. The Tahsildhar, Muvattupuzha Taluk.
8. Chairman, SEIAA.
9. Website.
10. S/f
11. O/c

Forwarded/By Order

Administrator, SEIAA

STATE ENVIRONMENT IMPACT ASSESSMENT AUTHORITY KERALA

GENERAL CONDITIONS (for mining projects)

1. Rain Water Harvesting facility should be installed as per the prevailing provisions of KMBR / KPBR, unless otherwise specified.
2. Environment Monitoring Cell as agreed under the affidavit filed by the proponent should be formed and made functional.
3. Suitable avenue trees should be planted along either side of the tarred road and open parking areas, if any, including of approach road and internal roads.
4. Maximum possible solar energy generation and utilization shall be ensured as an essential part of the project.
5. Sprinklers shall be installed and used in the project site to contain dust emissions.
6. Eco-restoration including the mine closure plan shall be done at the own cost of the project proponent.
7. At least 10 percent out of the total excavated pit area should be retained as water storage areas and the remaining area should be reclaimed with stacked dumping and overburden and planted with indigenous plant species that are eco-friendly, if no other specific condition on reclamation of pit is stipulated in the E.C.
8. Corporate Social Responsibility (CSR) agreed upon by the proponent should be implemented
9. The lease area shall be fenced off with barbed wires to a minimum height of 4ft around, before starting of mining. All the boundary indicators (boards, stores, markings, etc) shall be protected at all times and shall be conspicuous.
10. Warning alarms indicating the time of blasting (to be done at specific timings) has to be arranged as per stipulations of Explosive Department.
11. Control measures on noise and vibration prescribed by KSPCB should be implemented.
12. Quarrying activities should be limited to day time as per KSPCB guidelines/specific conditions.
13. Blasting should be done in a controlled manner as specified by the regulations of Explosives Department or any other concerned agency.
14. A licensed person should supervise/ control the blasting operations.
15. Access roads to the quarry shall be tarred to contain dust emissions that may arise during transportation of materials.
16. Overburden materials should be managed within the site and used for reclamation of mine pit as per mine closure plan / specific conditions.
17. Height of benches should not exceed 5 m, and width should not be less than 5 m, if there is no mention is the mining plan/specific condition.
18. Mats to reduce fly rock blast to a maximum of 10 PPV should be provided.
19. Maximum depth of mining from general ground level at site shall not exceed 10m
20. No mining operations should be carried out at places having a slope greater than 45°.
21. Acoustic enclosures should have been provided to reduce sound amplifications in addition to the provisions of green belt and hollow brick envelop for crushers so that the noise level is kept within prescribed standards given by CPCB/KSPCB.
22. The workers on the site should be provided with the required protective equipment such as ear muffs, helmet, etc.
23. Garland drains with clarifiers to be provided in the lower slopes around the core area to channelize storm water.
24. The transportation of minerals should be done in covered trucks to contain dust emissions.
25. The proponent should plant trees at least 5 times of the loss that has been occurred while clearing the land for the project.
26. Disposal of spent oil from diesel engines should be as specified under relevant Rules/ Regulations.
27. Explosives should be stored in magazines in isolated place specified and approved by the Explosives Department.
28. A minimum buffer distance of 100m from the boundary of the quarry to the nearest dwelling unit or other structures, not being any facility for mining shall be provided.
29. 100 m buffer distance should be maintained from forest boundaries.

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

31. 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.

32. In the case of any change(s) in the scope of the project, extent quantity, process of mining technology involved or in any way affecting the environmental parameters/impacts as assessed, based on which only the E.C is issued, the project would require a fresh appraisal by this Authority, for which the proponentshall apply and get the approval of this Authority.

33. 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.

34. 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.

35. 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 State Environment Impact Assessment Authority (SEIAA) office 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.

36. A copy of the clearance letter shall be sent by the proponent to concerned Grama Panchayat/ 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.

37. 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 State Environment Impact Assessment Authority (SEIAA) office.

38. 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.Sign board with extent of lease area and boundaries shall be depicted at the entrance of the quarry, visible to the public

39. 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.

40. No change in mining technology and scope of working should be made without prior approval of the SEIAA, No further expansion or modifications in the mine shall be carried out without prior approval of the SEIAA, as applicable.

41. The Project proponent shall ensure that no natural water course and/or water resources shall be obstructed due to any mining operations. Necessary safeguard measures to protect the first order streams, if any, originating from the mine lease shall be taken.

42. Monitoring of Ambient Air Quality to be carried out based on the Notification 2009, as amended from time to time by the Central Pollution Control Board. Water sprinkling should be increased at places loading and unloading points & transfer point to reduce fugitive emissions.

43. The top soil, if any, shall temporarily be stored at earmarked site(s) only for the topsoil shall be used for land reclamation and plantation. The over burden (OB) generated during the mining operations shall be stacked at earmarked dump site(s) only. The maximum height of the dumps shall not exceed 8m and width 20m and overall slope of the dumps shall be maintained to 45^{0}. The OB dumps should be scientifically vegetated with suitable native species to prevent erosion and surface run off. In critical areas, use of geo textiles shall be undertaken for stabilization of the dump. The entire excavated area shall be backfilled. Monitoring and management of rehabilitated areas should continue until the vegetation becomes self-sustaining.

44. Catch drains and siltation ponds of appropriate size shall be constructed around the mine working, mineral and OB dumps to prevent run off of water and flow of sediments directly into the river and other water bodies. The water so collected should be utilized for watering the mine area, roads, green belt development etc. The drains shall be regularly desilted particularly after monsoon and maintained properly.

45. Effective safeguard measures such as regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of PM_{10} and $PM_{2.5}$ such as haul Road, loading and unloading points and transfer points – it shall be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central Pollution Control Board in this regard.

46. Fugitive dust emissions from all the sources should be controlled regularly. Water spraying arrangement on haul roads, loading and unloading and at transfer points should be provided and properly maintained.

47. Measures should be taken for control of noise levels below 85 dBA in the work environment.

48. A separate environmental management cell with suitable qualified personnel should be set-up under the control of a Senior Executive, who will report directly to the Head of the Organization.

49. The funds earmarked for environmental protection measures and CSR activate should be kept in separate account and should not be diverted for other purpose. Year wise expenditure should be reported to the State Environment Impact Assessment Authority (SEIAA) office.

50. The Regional Office of MOEF & CC located at Bangalore shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (S) of the Regional Office by furnishing the requisite data/information/monitoring reports.

51. Any appeal against this Environmental Clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

52. Concealing the factual data or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of Environment (Protection) Act, 1986.

53. The SEIAA may revoke or suspend the order, for non implementation of any of the specific or thisimplementation of any of the above conditions is not satisfactory. The SEIAA reserves the right to alter/modify the above conditions or stipulate any further condition in the interest of environment protection.

54. The above conditions shall prevail notwithstanding anything to the contrary, in consistent, or simplified, contained in any other permit, license on consent given by any other authority for the same project.

55. This order is valid for a period of 5 years or the expiry date of mine lease period issued by the Government of Kerala, whichever is earlier.

56. The Environmental Clearance will be subject to the final order of the courts in any pending litigation related to the land or project, in any court of law.

57. The mining operation shall be restricted to above ground water table and it should not intersect ground water table.

58. All vehicles used for transportation and within the mines shall have 'PUC' certificate from authorized pollution taking centre. Washing of all vehicles shall be inside the lease area'

59. Project proponent should obtain necessary prior permission of the competent authorities for drawal of requisite quantity of surface water and ground water for the project.

60. Regular monitoring of flow rates and water quality upstream and downstream of the springs and perennial nallahs flowing in and around the mine lease area shall be carried out and reported in the six monthly reports to SEIAA.

61. Occupational health surveillance program of the workers should be under taken periodically to observe any contractions due to exposure to dust and take corrective measures, if needed.

For Member Secretary, SEIAA Kerala