



Validity expires on 22.02.2023

**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 building stone quarry project in Sy. No.172, in Kodyathur Village, Kozhikode Taluk, Kozhikode District, Kerala by Mr.Habeebu Rahiman - Granted - Orders issued.

**STATE ENVIRONMENT IMPACT ASSESSMENT AUTHORITY, KERALA**

**No. 1136/EC/SEIAA/KL/2017**

**Dated, Thiruvananthapuram, 23.02.2018**

- Ref:1. Application received on 19.07.2017 from Mr.Habeebu Rahiman, Puthoor Madathil House, P.O., Mukkom Vianit, Kozhikode District, Kerala-673602.  
2. Minutes of the 78<sup>th</sup> meeting of SEAC held on 23<sup>rd</sup> August, 2017.  
3. Minutes of the 81<sup>st</sup> meeting of SEAC held on 30<sup>th</sup> & 31<sup>st</sup> October, 2017.  
4. Minutes of the 76<sup>th</sup> meeting of SEIAA held on 16.11.2017.  
5. Certificate received on 20.02.2018 from District Geologist, Kozhikode.  
6. Affidavit received on 20.02.2018 from Mr.Habeebu Rahiman.

**ENVIRONMENTAL CLEARANCE NO. 23/2018**

Mr.Habeebu Rahiman, Puthoor Madathil House, P.O., Mukkom Vianit, Kozhikode District, Kerala-673602, vide his application received online, has sought Environmental Clearance under EIA Notification, 2006 for the quarry project in Sy. No.172, in Kodyathur Village, Kozhikode Taluk, Kozhikode District, Kerala for an area of 5.91 Ha . The project comes under Category B/B2, Schedule 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 18<sup>th</sup> May 2012 of Ministry of Environment and Forests. The project comes under 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.	F.No.- 1136/EC/SEIAA/KL/2017
Name /Title of the project	Stone Mine ( Quarry ) project of Shri. Habeebu Rahiman

Name and address of project proponent.	<b>Mr. Habeebu Rahiman</b> Puthoor Madathil House, PO . Mukkom Vianit , Kozhikode, -673602, Dist.-Kozhikode (Kerala)
Owner of the land	Habeebu Rahiman
Survey No. District/Taluk/ and Village etc.	Project Site is situated at Survey No.172 of Kodiyathur Village, Kozhikode Taluk, Kozhikode District, Kerala for an area of 5.91 hectares
Category/Sub Category and Schedule	B2
Details of period of lease or permit with number including the beginning and expiry date of lease/permit period <b>(Copy to be attached)</b>	Project was working with permit till 09.12.2015
Present Status of the project	Existing Quarry
Date & Year of starting the work of the quarry project.	January 2018
Whether the quarry is working at present or not ?	Quarrying was stopped from the date 09.12.2015
If stopped working since when?	09.12.2015
Date of submission of Application	19.07.2017
Brief description of the project.	Proposed Capacity :75,000 MTA Area : 5.91 Ha Mineable reserves :13,48,618 MT Life of Mine About :18 years
GPS Co-ordinate	Latitude (N) 11°17'22.83"N to 11°17'34.35"N Longitude(E) 76°01'34.64"E to 76°01'45.01"E
Details of Authorized Signatory and address for correspondence	<b>Mr. Habeebu Rahiman</b> Puthoor Madathil House, PO . Mukkom Vianit , Kozhikode, -673602, Dist.-Kozhikode (Kerala)
<b>LAND DETAILS</b>	
Extent of area in hectares	5.91 Ha
Is the property forest land/ Govt. land/own land/patta land	Private owned land
Quantity of top soil/over burden produced and managed	The topsoil is estimated about <b>70920 cum</b> . The same will be stacked separately and it will be used for plantation purpose. About <b>15760 cum</b> waste will be generating during the life of the quarry. This will be stacked in the site for the purpose and same will be used for maintenance of internal & external roads and also for other civil construction works, as and when required. If the entire material is not used for maintenance, then the balance material will be used

	for backfilling the worked out quarry pit.
Latitude and Longitude	Latitude (N) 11°17'22.83"N to 11°17'34.35"N & Longitude(E) 76°01'34.64"E to 76°01'45.01"E
Topography of land and elevation	Part of the proposed land is already under mining and there is no vegetation in that area. The remaining land in the proposed land is mostly covered with native trees, shrubs, herbs, grass, climbers, bushes etc. The highest elevation of the lease area is 280 m. MSL and lowest is 340 m MSL. As the proposed area is hill rock, the drainage of the lease area is towards S & E. No habitants are located in the lease area. Old pits lies in the lease area are marked on surface plan.
Slope analysis	Currently site having slope approximately 22, shall be reduced to approximately 18 after the period of mining.
Will there be any significant land disturbance resulting in soil erosion, subsidence & natural drainage.	During the mining operation top soil and over burden shall be removed and stacked with in the premises of the site, which shall be kept in safe way as avoid the erosion and silting in the water ways. The same will be reused in the mined out areas of the site and shall plant natural trees. Since proposed mining plan recommends the operations up to the minimum MSL, no significant subsidence will be occurred during the operation phase. There is no natural drainage available with in the study area.
Access road to the site width and condition	7.5 m width approach road
Will there be any adverse impact on the aesthetics of the proposal site	During the operation phase, natural trees and plantations shall be removed, the same could be developed again by the active practices of afforestation.
<b>MINING DETAILS</b>	
Minimum and Maximum height of excavation.	280msl & 340msl
Life of mine proposed	18
Underground mining if any proposed	NIL
Method of Mining	Open cast; Semi Mechanized.
Distance from the adjacent quarry	400 m
Cluster condition if any	No
Has "No cluster certificate" submitted?	Nil
Distance from nearby habitation	127 m (Mrs. Renji Sebastian Residing)
Distance from nearby forest, if applicable	Forest: Koompara, 16 Km SE
Distance from protected area, Wildlife Sanctuary, National Park etc.	NA

Distance from nearby streams/rivers/National Highway and Roads	NH17- at18 Km distance Water body: Iruvazhanji , 4.5 km , N	
Is ESA applicable? If so distance from ESA limit	Not Applicable	
Has approved mining plan, prepared by RQP submitted?	Yes	
Capacity of production in TPA	75000 TPA	
Details of mining process	18 years	
<b>DETAILS OF PROJECT COST</b>		
Land cost	1.0 Cr	
Plant and Machinery	0.75 Cr	
Total Cost	1.75 Cr	
Financial Statement including funding source and details of insurance etc.	Proponent shall arrange a part of the investment from his asset and remaining shall be arranged by Bank Loan	
Environment Management Plan	Air Pollution	<p>Dust released due to quarry activity (Heavy Earth Movers, Loaders, Rock breaker, etc) will be suppressed periodically by sprinkling of water</p> <p>Vehicles will be maintained in good conditions and regular servicing will be undertaken in order to limit vehicular pollution.</p> <p>Plantation will be carried out all along the lease periphery, which acts as acoustic barrier for noise transmission</p>
	Water Pollution	<p>Before onset of monsoon, drains are cut along toe of the quarry faces to divert the surface run off.</p> <p>Garland drains are provided at the quarry top to regulate monsoon water and direct the same to the settling ponds / quarry pit to contain the quarry wash off and to avoid the same joining the adjoining surface water bodies / water courses.</p>

		<p>Silt, if any, carried by monsoon run-off will be contained by the settling pond, and from settling pond clear water will be let out to the natural water courses.</p> <p>Rainwater harvesting pond will be maintained with in the quarry.</p> <p>Construction of check dam will be provided wherever necessary.</p>	
	Noise	<p>The quarrying operation will be restricted to only day time, to attenuate noise.</p> <p>Drilling with 32 mm hole diameter and blasting through latest technology to avoid fly rock and ground vibrations.</p> <p>Persons who are exposed to critical operation like drilling and operation of excavators are being provided personal protective equipments (PPEs) as occupational Safety Measures.</p> <p>Greenbelt will be developed which will act acoustic barrier for noise transmission.</p>	
	Solid Waste Management	<p>Total Top soil estimated to be 106380 tons which will be stacked separately and will be used for plantation.</p>	
	Eco-restoration	<p>The main aim of the green belt development is to restore the ecosystem by designing the green cover with the same native species.</p> <p>400 trees will be planted in an area of 5.91 Ha.</p> <p>For eco-restoration we are proposing inter cropping pattern of coffee and cocoa</p>	

		with rubber plantation. For green belt development we are proposing bamboo, jack fruit tree, mango tree and teak wood trees which are long lasting and having high dust collecting capacity.	
Whether Environment Management Plan or Eco restoration Plan satisfactory?	Yes , recommends afforestation , at each stages of the project development.		
Does it suggest mitigation measures for each activity	Yes, Detailed in Environment Management Plan		
Is Pre-Feasibility Report (PFR) satisfactory	Ycs		
Does it need public hearing	NA		
Details of litigation and Court verdict if any	Nil		
Details of public complaint, if any	Nil		
Details of statutory sanction required	NA		
If CRZ recommendation applicable?	Not applicable		
<b>PART B</b>			
<b>ENVIRONMENT IMPACT ASSESSMENT AND MITIGATION MEASURES</b>			
Details of water requirement per day in KLD	1 KLD Domestic sanitary needs 3 KLD Dust suppression 2 KLD Watering the Plantation		
Water source/sources	Well water & storm water collection pond		
Expected water use per day in KLD.	6KLD		
Details of water requirements met from water harvesting.	5 KLD		
What are the impact of the proposal on the ground water?	The ground water level measured from the nearest well is about 10-15 m below the ground level, which is at 250 m MSL . The ultimate depth of the working of the quarry is 280 m MSL. Since the working is above the general ground water table, it does not affect the ground water.		
How much of the water requirement can be met from the recycling of treated waste water? (Facilities for liquid waste treatment)	Not Applicable		
What is the incremental pollution load from waste water generated from the proposed activities?	About 0.5 KLD domestic effluent will be generated and the same will be treated through CPCB approved septic tank and soak pit designed as per the guidelines of CPCB.		
How is the storm water from within the site managed?	Storm water collection Tank shall be constructed with in the site		

### IMPACT ON BIODIVERSITY AND ECO RESTORATION PROGRAMMES

Will the project involve extensive clearing or modification of vegetation (Provide details)	Now site belongs to Rubber Plantation and having few of the natural trees, to some extent same shall be removed while project at operational. Project proposed an active afforestation practices at different stages of project development
What are the measures proposed to minimize the likely impact on vegetation (details of proposal for tree plantation/ landscaping)	<p>The project site is predominately covered by, Coconut, Rubber plantation...etc,(Approximately 350-400 trees )</p> <p>These species are commonly found in the region, and none of them figure in the rare category plants of IUCN.</p> <p>Shall plant equal no of plants in Buffer Zone and near by area owned by the proponent</p> <p>Faunal diversity is also observed to be not very rich with the occurrence of some common birds, Mammals and Reptiles.</p>
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).	Nothing found in the study area

### IMPACT ON AIR ENVIRONMENT

What are the mitigation measures on generation of dust, smoke and air quality	<p>The different measures taken to control dust emissions are given below:-</p> <ul style="list-style-type: none"> <li>• Water sprinkling on haul roads</li> <li>• Wet drilling</li> <li>• Limiting the speed of the vehicles</li> <li>• Regular maintenance of vehicles/ equipments</li> <li>• Loaded Trucks will be covered with tarpaulin sheets during transportation</li> </ul>
Details of internal traffic management of the site.	Even the project covers a small area, a 7.5 m wide road shall be maintained within the site for the trafficking of truck, haul and other machineries.
Details of noise from traffic, machines and vibrator and mitigation measures	Mining will be by semi mechanized opencast method so no significant increase in noise level is expected. However measures such as Green belt around the mining area shall be providing. 7.5m wide road used for trafficking at safe distance. The operation shall be conducted in day time only.
Impact of DG sets and other equipments on noise and vibration and ambient air quality around the project	DG sets and Other equipments having CPWD specifications shall be used for the operation

site and mitigation measures						
Air quality monitoring in detail	Quality of present ambient air is within the permissible limit					
	Parameter	unit	STATION			NAAQ Standard
			A1	A2	A3	
	PM <sub>10</sub>	µg/m <sup>3</sup>	69.2	61.3	63.7	100
	PM <sub>2.5</sub>	µg/m <sup>3</sup>	30.2	18.5	21.4	60
	SO <sub>2</sub>	µg/m <sup>3</sup>	8.7	8.1	8.3	80
	NO <sub>x</sub>	µg/m <sup>3</sup>	10.5	10.2	10.9	80
CO	mg/m <sup>3</sup>	1.1	0.8	0.9	2	
ENERGY CONSERVATION						
Details of power requirement and source of supply.	The total power requirement will be 75 kW, which will be drawn from diesel engine. Fuel Quantity – 16 to 20 lt/ hr.					
Details of renewable energy (non – conventional) used.	Nil					
RISK MANAGEMENT						
Are there sufficient measures proposed for risk hazards in case of emergency such as accident at the site?	<p>The stone quarry mine will result in increase in frequency of blasting for mining the mineral. However, controlled blasting with optimum charge of holes will be carried out to loosen the rock. Explosion hazards are envisaged due to mishandling of explosives. Explosives will be handled with utmost care in compliance of conditions imposed by Chief Controller of Explosive &amp; Metalliferous Mines Regulation, 1961. NFO mixture, slurry explosive, safety fuse, and detonators will be used for blasting.</p> <p>The risks of accidents are envisaged due to the operation of equipments, failure of mine pit etc. Pit slope will be kept at 45°. Face slope will be kept at 70°. No loose stone will be allowed near the edges of excavation and along the sites of haul road. However, good safety practices will be adopted at the site. All precautionary measures will be adopted and use of protective equipments will be mandatory. However, for minor accidents first aid measures will be provided at site</p>					
Are proposals for fencing around the quarry satisfactory? Storage of explosives/hazardous substance in detail Facility for solid waste management	<p>Yes, provided an effective fencing around the premises.</p> <p>Magazine shall be kept at a safe area and provide an security for the same</p>					
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?	Not Applicable					



Will the proposal result in any changes to the demographic structure of local population. If so, provide details.	Nil,																		
Details of CSR commitment	<table border="1"> <thead> <tr> <th colspan="3">CSR Activities proposed to be carried out</th> </tr> <tr> <th>Sl.No</th> <th>Particulars</th> <th>Amount in Rs.in lakhs</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Promotion of Education</td> <td>50,000</td> </tr> <tr> <td>2</td> <td>Environmental Sustainability</td> <td>15,000</td> </tr> <tr> <td>3</td> <td>Health Care</td> <td>1,25,000</td> </tr> <tr> <td>4</td> <td>Social Aspects</td> <td>50,000</td> </tr> </tbody> </table>	CSR Activities proposed to be carried out			Sl.No	Particulars	Amount in Rs.in lakhs	1	Promotion of Education	50,000	2	Environmental Sustainability	15,000	3	Health Care	1,25,000	4	Social Aspects	50,000
CSR Activities proposed to be carried out																			
Sl.No	Particulars	Amount in Rs.in lakhs																	
1	Promotion of Education	50,000																	
2	Environmental Sustainability	15,000																	
3	Health Care	1,25,000																	
4	Social Aspects	50,000																	
What are the projects benefits in terms of employment potential?	Additional direct and indirect employment opportunities will be generated for the local workers and other people.																		
<b>PART C</b>																			
Details of RQP engaged-Their name, address and accreditation details	Mahesh S (RQP/BNG/338/2014/A) TC31/580, Navadeepam, S N Nager Pettah (p.o), Trivandrum – 695024 Kerala .																		
<b>SUMMARY AND CONCLUSION</b>																			
Overall justification for implementation of the project	The project provides direct and indirect employment opportunities to the people of the surrounding areas. There is no rehabilitation involved in this project. Maximum possible area will be reclaimed and green belt will be provided. 10 % of the lease area will be converted in to water pond for rain water harvesting. The project will help infrastructural developmental activities in the region. Government will earn revenue in the form of royalty.																		
Explanation of how adverse impact have been mitigated	Environmental Management Plan and Risk Assessment have been prepared. All the proposed possible mitigation measures shall be implemented in the operation phase of project.																		

2. The proposal was placed in the 78<sup>th</sup> meeting of SEAC held on 23<sup>rd</sup> August, 2017. Further to the intimation of SEAC, the Proponent and the RQP attended the meeting and RQP made a power point presentation about the salient features of the project. 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.8 lakh per year for CSR activities for the welfare of the local community in consultation with the local Panchayat. The Committee decided to defer the item for field inspection.

Subsequently, site visit was conducted on 01.10.2017 by Subcommittee consisting of Dr P S Harikumar & Dr Khaleel Chovva. The representatives of the proponent were present at the site at the time of site visit. The report is as follows;

*The proponent was present at the site. The proposed project site falls within Latitude 11°17'22.83"N to 11°17'34.35"N to Longitude 76°01'34.64"E to 76°01'45.01"E. It is an existing quarry, but for last many years no activity had taken place. Top soil and overburden thickness vary from 2.0 to 0.98 m. Good floral diversity is present at the site. The area is having thick vegetation and many trees are present. No facility had been provided for the collection of rain water. The boundary pillars were not erected properly. No fencing was provided. The access to the site is not properly maintained. There is no proper access to the site. Benches are not formed. The topography is undulated.*

*Based on the visit of the site, following aspects may be considered before it is recommended for EC*

- *The entire quarry area should be fenced all around. Boundary pillars should be erected properly with legible markings*
- *The approach road should be developed and properly surfaced.*
- *The rich floral biodiversity shall be protected*
- *Benches should be formed properly and wherever deep cliffs are present, those areas should be avoided for quarrying*
- *Appropriate sign boards should be erected all around the quarry site*
- *Appropriate drains should be provided to collect the rain water water should be clarified before discharge*
- *Since the area has a rich floral biodiversity, a green belt should be developed around the quarry and should be make sure that no endemic species*
- *Any plant species endemic to Western Ghats are available shall be protected in situ or transplanted to an appropriate place*

3. The proposal was placed in the 81<sup>st</sup> meeting of SEAC held on 30<sup>th</sup> & 31<sup>st</sup> October, 2017. The proposal was appraised by SEAC after considering Form I, Form IA, Conceptual plan, field visit report and all other documents and details provided by the proponent and decided to **Recommend for issuance of EC** subject to 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.8 lakh per year for CSR activities for the welfare of the local community to be implemented in consultation with the local Panchayat.

4. The proposal was placed in the 76<sup>th</sup> meeting of SEIAA held on 16.11.2017. Authority accepted the recommendation of SEAC and decided to issue EC subject to general conditions in addition to the following specific conditions.

- *The entire quarry area should be fenced all around. Boundary pillars should be erected properly with legible markings*
- *The approach road should be developed and properly surfaced.*
- *The rich floral biodiversity shall be protected*
- *Benches should be formed properly and wherever deep cliffs are present, those areas should be avoided for quarrying*
- *Appropriate sign boards should be erected all around the quarry site*
- *Appropriate drains should be provided to collect the rain water. Water should be clarified before discharge*
- *Since the area has a rich floral biodiversity, a green belt should be developed around the quarry and should be make sure that no endemic species*
- *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.8 lakh per year for CSR activities for the welfare of the local community to be implemented in consultation with the local Panchayat and details should be forwarded to SEIAA. EC will be issued only after fulfilling all the pre-mining conditions in the project site and a certificate to this effect from a competent authority (RDO/Tahsildhar/District Geologist) should be submitted. A notarised affidavit for the commitment of CSR activities and also agreeing to all the general and specific conditions should be submitted before the issuance of EC.

5. The proponent has submitted an affidavit vide reference 6<sup>th</sup> cited, satisfying all the above conditions. Environmental clearance as per the EIA notification 2006 is hereby accorded for the proposed building stone quarry project in Sy. No.172, in Kodyathur Village, Kozhikode Taluk, Kozhikode District, Kerala of Mr.Habeebu Rahiman, Puthoor Madathil House, P.O., Mukkom Vianit, Kozhikode District, Kerala-673602, for an area of 5.91 Ha, subject to the specific conditions as recommended in para 4 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.

6. 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 undertakings and conditions subject to all the mining features, Environmental Management Plans as undertaken in the Mining Plan and EMP submitted to SEIAA will be deemed to be part of this proceedings as conditions as undertaken by the proponent, as if incorporated herein.

7. 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.

8. 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, Kozhikode 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.Habeebu Rahiman, Puthoor Madathil House, P.O., Mukkom Vianit, Kozhikode District, Kerala-673602

Sd/-

**P.H.KURIAN.I.A.S,**  
**Member Secretary (SEIAA)**

To,

Mr.Habeebu Rahiman,  
Puthoor Madathil House, P.O.,  
Mukkom Vianit,  
Kozhikode District-673602

Copy to,

1. MoEF Regional Office, Southern Zone, Kendriya Sadan, 4<sup>th</sup> 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, Kozhikode
6. The District Geologist, Kozhikode
7. The Tahasildar, Kozhikode Taluk, Kozhikode District
- ✓ 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 proponents shall 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](http://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°. 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<sub>10</sub> and PM<sub>2.5</sub> 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 shall 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

