



Validity expires on 28.05.2022

Proceedings of the State Environment Impact Assessment Authority Kerala

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

Sub: SEIAA- Environmental clearance for the quarry project in Sy. No. 358/1A1A1A at Padichira Village, Sultan Bathery Taluk, Wayanad District, Kerala by Sri. Mr.Binoj.K.Baby, M/s.Pulpally Stone Crushers - EC granted – Orders issued.

STATE ENVIRONMENTAL IMPACT ASSESSMENT AUTHORITY, KERALA

No. 824/EC3/2607/SEIAA/2015

Dated, Thiruvananthapuram 29.05.2017

- Ref: 1. Application dated 07.07.2015 from Sri.Binoj.K.Baby, Pulpally Stone Crushers, Sasimalai P.O, Sultan Bathery Taluk, Wayanad District, Kerala
2. Minutes of the 48th SEAC meeting held on 06th and 07th November, 2015
3. Minutes of the 68th meeting SEAC held on 20th & 21st February 2017
4. Minutes of the 66th meeting of SEIAA held on 07th April 2017

ENVIRONMENTAL CLEARANCE NO.36/2017

Sri.Binoj.K.Baby, Pulpally Stone Crushers, Sasimalai P.O, Sultan Bathery Taluk, Wayanad District, Kerala vide his application received on 07.07.2015, has sought Environmental Clearance under EIA Notification, 2006 for the quarry project in Sy. No. 358/1A1A1A at Padichira Village, Sultan Bathery Taluk, Wayanad District, Kerala for an area of 1.52 hectares. 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.

The proposed project site falls within Latitude N 11°49'14.0" to N 11°49'17.9" Longitude E 76°11'41.5" to E 76°11'47.9". quarry having lease area 1.52 hectares of private land. Total production will be 1, 02, 450 TPA (Max) applying Open cast semi-mechanized mining. Letter from geologist has been submitted to state there is no other quarries within 500 m. It is submitted that there are no surface water bodies within the lease area and the nearest water body is the Kabani river flow at about 4 kms from the quarry lease area. There is no human inhabitation in the proposed quarry lease area. The interstate boundary between Kerala and Karnataka and the Begur State Forest in Karnataka is within a distance of 1.5 kms from the lease area.

BASIC INFORMATION OF QUARRY PROJECT

PART A

I. Project details		
	File No.	824/EC3/2607/SEIAA/2015
	Name /Title of the project	Pulpally stone quarry of M/s. Pulpally Stone Crushers
	Name and address of project proponent.	Pulpally Stone Crushers Sisimalai P.O. Sultan Bathery Taluk Wayanad District., Kerala, India Ph No. : 09447866097
	Owner of the land	Binoj K. Baby
	Survey No. District/Taluk/ and Village etc.	Sy No 358/1A1A1A in Padichira Village, Sultan Bathery Taluk, Wayanad District, Kerala State.
	Nature of the proposal – lease or permit with evidence.	Applied for Mining Lease : Extent: 1.52Ha Evidence: Letter of Intent (LOI) from the Department Mines & Geology , Kerala(Annexure -1)
	Date of submission of Application	04.07.2015
	Brief description of the project.	Granite building Stone Quarry- B2 Category. M/s Pulpally Stone Crushers, over an extent of 1.52Ha is a granite building stone mining project. The granite building stone is the basic rock in this area to be excavated by quarrying. This Building Stone quarry is proposed to be operated by Opencast Semi-Mechanized Quarrying Method. The mechanized operation of quarry shall use excavators, tippers, rock breakers, Jack hammer drilling and blasting. The excavated material shall be crushed in the crushers located outside the quarry lease area. The maximum production capacity proposed in this area is 1, 02, 450 tonnes per annum building stone of size - 150mm.
	Details of Authorized Signatory and address for correspondence	Binoj.K. Baby Sultan Bathery Taluka Wayanad District., Kerala, India Ph No. : 09447866097
II. Land Details		
	a) Extent of area in hectares	1.52 Ha
	b) Is the property forest land/Govt. land/own land/patta land	Own land /Patta Land
	c) Quantity of top	About 7880 tonnes of top soil is likely to be recovered till

	soil/over burden produced and managed	the conceptual stage of the quarry, which will be removed separately & used in afforestation/ developing green belt, safety barrier area. Apart from this topsoil no waste is expected to be generated due to this quarrying activity. Thus no separate waste dump is earmarked in the quarry project.
	d) Latitude and Longitude	N11°49'14.0" to N11°49'17.9" E76°11'41.5" to E76°11'47.9"
	e) Topography of land and elevation	This Pulpally Stone Quarry area is located on the southern slopes of hillock. There is an old quarrying pit of about 5m depth with in this area. The size of the pit is 18m in length and 11m in width. The highest elevation in this area is 807.1mRL and the lowest elevation is 790.6mRL.
	f) Slope analysis	The general slope of the lease hold area is quite gentle between 4° to 8° degree, The overall ultimate pit slope shall be maintained at less than 45°.
	g) Will there be any significant land disturbance resulting in soil erosion, subsidence & natural drainage.	No
	h) Access road to the site width and condition.	Asphalted road layed by lessee over a length of approx. 1Km with a width of 7m.
	i) Will there be any adverse impact on the aesthetics of the proposal site	No, A well developed green belt and a pond for pisciculture will improve the aesthetic values of the propose site.
III. Mining details		
	a) Minimum and Maximum height of excavation.	The highest elevation in this area is 807.1mRL and the lowest elevation is 790.6mRL.
	b) Life of mine proposed.	15 Years
	c) Underground mining if any proposed	No
	d) Method of Mining	Opencast Semi-Mechanised Quarrying Method
	e) Distance from the adjacent quarry	No, Adjacent quarry within 500m Radius
	f) Cluster condition if any	No
	g) Has "No cluster certificate" submitted?	Yes, certificate from Senior Dept. of Mines & Geology Wayanad Dist, Kerala, dated:15.06.2015
	h) Distance from nearby habitation	Padichira located at 3km from the mining lease area
	i) Distance from nearby forest, if applicable	Begur state forest in Karnataka distance 1.5Kms (Area less than 5Ha General condition does not attract) as per MOEF

		notification No: SL 141(E), 15 Jan 2015	
	j) Distance from protected area, Wildlife Sanctuary, National Park etc.	Nil, within the buffer zone	
	k) Distance from nearby streams/rivers/National Highway and Roads	The Kabani River flow at about 4 kms from the quarry lease area.	
	l) Is ESA applicable? If so distance from ESA limit	NA	
	m) Has approved mining plan, prepared by RQP submitted?	Yes	
	n) Capacity of production in TPA	1,02,450 tonnes per annum	
	o) Details of mining process	<p>The quarrying of granite building stone is proposed by opencast semi-mechanized quarrying method and the sequence of quarrying shall be as given under,</p> <p>The top soil shall be removed and used in afforestation / Green belt / Safety barrier all along the periphery of the quarry lease area.</p> <p>After exposing the granites, drilling of small diameter holes of 33mm, shall be done by jack hammer.</p> <p>The blasting shall be carried out by conventional blasting material with proper burden & spacing.</p> <p>The blasted material and the broken material by rock breakers shall be loaded to the tippers by excavator and transported to the crushing and screening plant located outside the quarry lease area.</p>	
		IV. Details of Project cost	
	a) Land cost	10.0 Lakhs (owned by the project proponent)	
	b) Plant and Machinery	60.0 Lakhs	
	c) Total Cost	175 Lakhs	
	V. Financial Statement including funding source and details of insurance etc.	New Project	
	Management Plan	Air Pollution	Given in Approved Mining Plan Submitted
		Water Pollution	-do-
		Noise	-do-
		Solid Waste Management	-do-

		Eco-restoration	-do-	
	VI. Whether Environment Management Plan or Eco restoration Plan satisfactory?	Yes		
	VII. Does it suggest mitigation measures for each activity	Yes		
	VIII. If Pre-Feasibility Report (PFR) satisfactory	Yes		
	IX. Does it need public hearing	No		
	X. Details of litigation and Court verdict if any	Nil		
	XI. Details of public complaint, if any	Nil		
	XII. Details of statutory sanction required	Mining Lease to be executed after issue of Environment Clearance, by SEIAA		
	XIII. If CRZ recommendation applicable?	NA		
PART B				
Environment Impact Assessment and Mitigation Measures				
B2 – Category Project EIA/EMP Not Applicable				
Impact on water				
	a) Details of water requirement per day in KLD	37 KLD (Max)		
	b) Water source/sources.	Abandoned old quarry pits and bore wells		
	c) Expected water use per day in KLD.	37 KLD (Max)		
	d) Details of water requirements met from water harvesting.	A RWH pond is proposed adjacent to the mine. The harvested water will be utilized for the mining operation.		
	e) What are the impact of the proposal on the ground water?	<p>The water to the tune of 37 KLD will be draw from the old abandoned bore wells located outside the lease area.</p> <p>About 37 KLD (2 KLD for Drinking water & 5 KLD for Plantations and 30 KLD for dust suppression)</p> <p>The 5 KLD for afforestation and 30KLD of water for plantations and dust suppression (water will not be required for about 4-5 months in year, during the monsoon and rainy/ wet days</p>		
	f) How much of the water requirement can be met from the recycling of treated waste water?	There is no waste water generated from the quarry operations.		

	(Facilities for liquid waste treatment)	
	g) What is the incremental pollution load from waste water generated from the proposed activities?	There is no waste water generated from the quarry operations.
	h) How is the storm water from within the site managed?	Garland drains shall be made all along the periphery of the mining lease and water diverted to silt settling Tank, Rain Water Harvesting Pond and there after diverted to natural water course to series of gully plugs and check dam.
Impact on Biodiversity and Eco restoration Programmes		
	a) Will the project involve extensive clearing or modification of vegetation (Provide details)	No
	b) What are the measures proposed to minimize the likely impact on vegetation (details of proposal for tree plantation/ landscaping)	Minimum 1300 Saplings with good local biodiversity/ Species shall be planted in the green belt and haul roads.
	c) Is there any displacement of fauna – both terrestrial and aquatic. – If so what are the mitigation measures ?	No No
	d) Presence of any endangered species or red listed category (in detail)	
Impact on Air Environment		
	a) What are the mitigation measures on generation of dust, smoke and air quality	<p>Water sprinkling will be done on the roads regularly.</p> <p>The quarrying operations including excavation and blasting shall be suspended during high wind.</p> <p>Fortnightly maintenance of road in order to keep the roads almost leveled will be done to ensure smooth flow of vehicles and to prevent spillage of mined material. All trucks carrying material outside the mine will be covered with tarpaulin to avoid spillage and fly off.</p> <p>Overloading will be kept under check by giving prior awareness.</p> <p>Proper tuning of vehicles will be ensured to keep the gas emissions from the vehicles within the prescribed norms.</p> <p>Plantation of trees along the roads and green belt development will be done to attenuate the impact of dust in the nearby /surroundings area.</p>

	b) Details of internal traffic management of the site.	The blasted material shall be transported to the crushing and screening plant belonging to M/s.Pulpally Stone Crushers, located outside the quarry lease area at a distance of 60m from the periphery of the Quarry. All norms as per DGMS standards would be followed.
	c) Details of noise from traffic, machines and vibrator and mitigation measures	<p>All equipment shall be fitted with silencer and /or Acoustic enclosures, hoods, shall be provided in noise generating areas, to the extent possible, so that the sound pressure levels in working areas shall be restricted below 75 dB (A). This shall be regulated before engaging the equipment or purchase of the same.</p> <p>Provisions of rotation of workers to minimize exposure time as well as provision of earmuffs to workers exposed to high noise areas shall be practiced.</p> <p>Use of sharp drilling bits, delivery of compressed air at optimal pressure.</p> <p>Care will be taken to produce minimum sound during loading/excavation.</p> <p>The equipments and machines shall be maintained properly.</p> <p>Phasing out of old and worn out trucks and equipment.</p> <p>Minimum use of Horns at the village area shall keep the noise level under control.</p> <p>Individual blasting with low intensity slurry/ Emulsion explosives and Proper charge per delay shall be regulated.</p> <p>No secondary blasting like Pop blasting and plaster shooting shall be undertaken, to avoid airblast, noise, vibration & flyrock.</p> <p>Plantation of trees along the haulage road and green belt area will be done to attenuate the noise to be generated from quarrying activities.</p> <p>Awareness will be imparted prior to mining operations to all the operators & other persons concerned, so that they must be aware of detrimental effects of noise pollution.</p> <p>Regular monitoring of noise level shall be done inside and outside the quarry lease area.</p>
	d) Impact of DG sets and other equipments on noise and vibration	DG set shall not be used

	and ambient air quality around the project site and mitigation measures																
	e) Air quality monitoring in detail	<p>Detected AAQ in Core & Buffer zone.</p> <table border="1"> <thead> <tr> <th>Area</th><th>PM10$\mu\text{g}/\text{m}^3$</th><th>PM2.5$\mu\text{g}/\text{m}^3$</th></tr> </thead> <tbody> <tr> <td>Core</td><td>74</td><td>36</td></tr> <tr> <td>Padichira</td><td>37</td><td>21</td></tr> <tr> <td>Sasimala</td><td>34</td><td>18</td></tr> <tr> <td>Majjanda</td><td>43</td><td>22</td></tr> </tbody> </table> <p>Well with the standard limit</p>	Area	PM10 $\mu\text{g}/\text{m}^3$	PM2.5 $\mu\text{g}/\text{m}^3$	Core	74	36	Padichira	37	21	Sasimala	34	18	Majjanda	43	22
Area	PM10 $\mu\text{g}/\text{m}^3$	PM2.5 $\mu\text{g}/\text{m}^3$															
Core	74	36															
Padichira	37	21															
Sasimala	34	18															
Majjanda	43	22															
Energy Conservation																	
	a) Details of power requirement and source of supply.	All machines are self propelled hence there is no requirement of additional power.															
	b) Details of renewable energy (non – conventional) used.	Solar lights shall be used for the propose lighting.															
Risk Management																	
	a) Are there sufficient measures proposed for risk hazards in case of emergency such as accident at the site?	Yes, this is elaborated in the EMP.															
	b) Are proposals for fencing around the quarry satisfactory?	Yes															
	c) Storage of explosives/hazardous substance in detail	Explosive magazine of the company is located in Survey No 358/1A1A1A, Padichira Village, Sultan Bathery Taluk, Wayanad District, Kerala															
	d) Facility for solid waste management	Explosive license No. E/SC/KL/22/1309(E62471). No solid waste is envisaged to be generated in this quarry.															
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?	No, There will be no local disturbance															
	b) Will the proposal result in any changes to the demographic structure of local population. If so, provide details.	No Change. Infact the employment opportunities and CSR will have a positive impact on the living condition and status of the local people															

	c) Are the CSR proposals satisfactory. Give details	The proponent should set apart Rs.7 lakh (non-recurring) and Rs.7 lakh per annum (recurring) for CSR activities for the welfare of the local community in consultation with the local Panchayat
	d) What are the projects benefits in terms of employment potential?	Total 30 People directly and equal number of indirectly employment is envisaged.
PART C		
	Details of NABET approved EIA Consultant engaged- Their name, address and accreditation details	Global Environment & Mining Services. HBR Layout 5 th Block, 5 th Main, 1 st Cross, 1stage, Bangalore-560043. NABET Certificate No: NABET /EIA/1618/RA0030
Summary and Conclusion		
	a) Overall justification for implementation of the project.	<p>The Project is techno- economically viable with Social Economic up-liftment of the local people. This new project will meet the development needs of the local region and the state without causing any negative influence on the environment.</p> <p>At the end of the mine at the conceptual stage the well developed Green belt and the conversion of the mined out pit into a Pisciculture pond shall have a very positive effect on the Bio-diversity of the area.</p> <p>This will also enhance the aesthetic value of the area. It can be summarized that the development of Pulpally Stone Quarry with a well managed EMP shall have a positive impact on the Socio-economic and the Environment of the area and lead to overall Sustainable development of the region.</p>
	b) Explanation of how adverse impact have been mitigated.	The major anticipated Environment Impact due to quarrying is air pollution and increase in noise level, which can be considerably mitigated by effective dust suppression system, maintenance of haul road, preventing spillage of material on road, avoiding drilling and blasting, speed control on vehicles, regular maintenance of machinery, afforestation in green belt and all along the haul road and other all other measures elaborated in the EMP. Regular environment monitoring shall be undertaken to monitor the environmental parameters and adopt appropriate mitigative measures.

2. The proposal was first considered in the 48th SEAC meeting held on 06th and 07th November, 2015. Further to the intimation of SEAC, the proponent along with the consultant attended the meeting and made a brief power-point presentation.

The mining plan submitted is as per KMMC Rule 1967 and hence a revised mining plan as per KMMC Rule 2015 is required. There is no quarry within 500m radius. The area proposed for quarrying is 1.52 Ha. The life of mine is 15 years. The highest elevation of the

proposed site is 807 mRL and lowest is 790.6 mRL. The ultimate depth of the quarry is 764m RL. The committee also suggested channelizing the drainage in a proper way. The Committee opined that the ultimate depth of mining should be limited to the river bed level.

The committee deferred the item for Field Inspection to assess the ground realities including the drainage pattern and production of following documents/details;

1. The cadastral map of the area
2. Details of application submitted for wild life clearance
3. Revised Mine plan as per KMMC Rule 2015.
4. A detailed biodiversity report of the proposed area with IUCN status of various species
5. A more realistic need based CSR proposal.

Subsequently, Site visit was conducted on 23.6.2016 by subcommittee consisting of Sri S Ajayakumar, Dr.P.S Harikumar and Dr. George Chackachery. The proponent was present during the site visit.

Inferences

It is an existing quarry

The proponent could not produce any document for filing the application for wildlife clearance.

The revised mining plan as per KMMC 2015 is yet to be submitted

The overburden is not stored properly

Recommendations

- 1) The application needs to be further considered only after receiving the revised mining plan as per KMMC 2015
- 2) Fencing should be provided all around the quarry
- 3) No proper drainage is available. A well-defined drainage should be provided with facility for clarification pond. After clarification only the water should allowed to discharge
- 4) Overburden should be stored at a designated place
- 5) Application shall be submitted to get wild life clearance
- 6) A realistic CSR should be submitted

The proponent has submitted the documents/clarifications sought by SEAC in its Sub Committee.

3. The proposal was placed in the 68th meeting SEAC held on 20th & 21st February 2017. The Committee appraised the proposal based on Form I, Pre-feasibility Report, revised Mining Plan, field inspection report of the Sub Committee and all other documents submitted with the proposal. The Committee decided to Recommend for issuance of EC subject to general conditions in addition to the following specific conditions.

1. *If any plant species endemic to Western Ghats are noticed in the area they shall be properly protected in situ or by transplanting to an appropriate location inside the lease area.*

The proponent agreed to set apart Rs.7 lakh (non-recurring) and Rs.7 lakh per annum (recurring) for CSR activities for the welfare of the local community in consultation with the local Panchayat.

4. The proponent stated that a small portion of the proposed Mining Lease area is a working Quarry with a valid Mining permit, over an area of 9.7 Ares (24 cents) valid upto 28.9.2017. They informed that they do not have the EC and on account of the recent order of the Hon'ble Supreme court of India, they have presently stopped all mining operations in the Permit area. They will be able to resume operations in the Quarry only after obtaining the EC and the execution of the Mining Lease, over the area. An affidavit to this effect will be submitted.

5. The proposal was considered by the Authority in its 66th meeting held on 07th April 2017. The Authority decided to issue Environmental Clearance subject to the general conditions and the above specific condition. The proponent should submit an affidavit stating that the quarry was not working after December 2016/ after the period of permit, whichever is earlier and that all the conditions suggested by the inspection team have been implemented.

6. The proponent has submitted the affidavit satisfying all the above conditions. Environmental clearance as per the EIA notification 2006 is hereby accorded for the proposed quarry project of Sri.Binoj.K.Baby, Pulpally Stone Crushers, Sasimalai P.O, Sultan Bathery Taluk, Wayanad District, Kerala Sy. No. 358/1A1A1A at Padichira Village, Sultan Bathery Taluk, Wayanad District, Kerala for an area of 1.52 hectares, subject to the conditions as recommended by SEAC in para 2 & 3 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, 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 6 (Mine Drainage), Chapter 7 (Stacking of Mineral rejects and Disposal of waste) 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, Wayanad to take legal action under the Environment (Protection) Act 1986.
- iii. The given address for correspondence with the authorised signatory of the project is Sri.Binoj.K.Baby, Pulpally Stone Crushers, Sasimalai P.O, Sultan Bathery Taluk, Wayanad District, Kerala.

Sd/-

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

To,

Sri.Binoj.K.Baby,
Pulpally Stone Crushers,
Sasimalai P.O, Sultan Bathery Taluk,
Wayanad District, Kerala.

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. Director, Mining & Geology, Thiruvananthapuram -4.
4. District Collector, Wayanad
5. District Geologist, Wayanad
6. Secretary, Mullenkolly Village, Sulthan Bathery Taluk, Wayanad
7. Chairman, SEIAA.
8. Website.
9. S/f
10. 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. 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 PM₁₀ 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

