



Validity expires on 17.05.2022

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 proposed building stone quarry project in Sy. Nos.138/(pt), 836(pt), 837(pt), 839(pt), 847(pt) at Killimangalam Village, Thalappilly Taluk, Thrissur District, Kerala by Sri. K. R. Viswanathan - EC granted – Orders issued.

STATE ENVIRONMENTAL IMPACT ASSESSMENT AUTHORITY, KERALA

No. 855/SEIAA/EC1/2979/2015

Dated, Thiruvananthapuram, 18.05.2017

- Ref: 1. Application dated 29-07-2015 from Sri. K. R. Viswanathan, M/s Chelakkara Granite, Managing Partner, S/o Raman Nair, Kannimangalath House, Ooramana P.O., Ramamangalam, Ernakulam District-686663
2. Minutes of the 50th meeting of SEAC held on 30/31-12-2015
3. Minutes of the 52nd meeting of SEAC held on 8th & 9th February, 2016
4. Minutes of the 56th meeting of SEAC held on 06/07-06-2016
5. Minutes of the 55th meeting of SEIAA held on 16-07-2016
6. Minutes of the 61st meeting of SEIAA, held on 30th November 2016.
7. Minutes of the 70th meeting of SEAC held on 4th & 5th April 2017.
8. Minutes of the 68th meeting of SEIAA held on 12.05.2017

ENVIRONMENTAL CLEARANCE NO.35/2017

Sri. K. R. Viswanathan, M/s Chelakkara Granite, Managing Partner, S/o Raman Nair, Kannimangalath House, Ooramana P.O., Ramamangalam, Ernakulam District-686663, vide his application received on 29-07-2015 has sought Environmental Clearance under EIA Notification, 2006 for the quarry project in Sy. Nos. 138/(pt), 370/3(pt), 836(pt), 837(pt), 838(pt), 839(pt), 847(pt) at Killimangalam Village, Thalappilly Taluk, Thrissur District, Kerala for an area of 4.1132 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.

This is an existing quarry was in operation with a short term quarrying permit issued by Mining & Geology Department, Govt of Kerala for an area of 0.4046 ha. The mining activity will have localized impact and create physical change in the existing environment due to the change in the land use. At the end of life of mine, the excavated pit will be 3.1203 ha, in which 2.7090 Ha will be reclaimed with stacked dumping and overburden and rehabilitated by plantation and the remaining part 0.4113 Ha will be used as a water pond.

The topography of the lease area is hilly. The highest elevation of the lease area is 130 m MSL and lowest is 94 m MSL. Solid waste: A total quantity of 60,550 tons of topsoil and 1,54,000 tons of mine waste will be removed during the mining operations. Top soil excavated from the quarry will be stacked at predetermined place and subsequently will be utilized for plantation. Mine waste material will be backfilled.

The land use classification as per revenue records is private own land and the current proposal is for the new quarry and mineral specific and hence no alternate site was examined. The proponent has stated that there is no litigation is pending against the lease area/applicant of the proposed lease area in any court of the law.

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

1. Project details	
File No.	855/SEIAA/E4/2979/2015
Name /Title of the project	Chelakkara Granite
Name and address of project proponent.	K. R Viswanathan Managing Partner Chelakkara Granite Killimangalam Post, Chelakkara Thrissur-680 591
Owner of the land	As per the records, the entire area is a private property owned by the Company and Kuttammath Arrakkal Sakeer Hussain, who have given consent to the company.
Survey No: District/Taluk/ and Village etc.	Sy.No-138(pt), 836(pt), 837(pt), 839(pt), 847(pt) Killimangalam Village, Thalappilly Taluk, Thrissur District of Kerala State
Details of period of lease or permit with number including the beginning and expiry date of lease/permit period(Copy to be attached)	Permit No- 11/2016-17/CRPS/GS/2300/C2/TDO/16 Dated 20.06.16 Area of 0.4100
Present Status of the project a. Date & Year of starting the work of the quarry project. b. whether the quarry is working at present or not ? c. If stopped working since when?	No 03-12-16
Date of submission of	29/07/2015

Application	
Brief description of the project.	Open cast Semi mechanized mining, B2
Details of Authorized Signatory and address for correspondence	<i>K. R Viswanathan Managing Partner Chelakkara Granite Killimangalam Post, Chelakkara Thrissur-680 591</i>
2.Land Details	
a) Extent of area in hectares	<i>4.2649 Ha</i>
b) Is the property forest land/Govt. land/own land/patta land	<i>Private land.</i>
c) Quantity of top soil/over burden produced and managed	<i>Top soil-69,630 MT Overburden- 1,46,300 MT</i>
d) Latitude and Longitude	<i>Longitude: 76°19'41.04" E to 76°19'50.60" E Latitude: 10°43'10.34" N to 10°43'19.91" N</i>
e) Topography of land and elevation	<i>Topography of lease area is hilly. Highest elevation of the lease area is 105m MSL and lowest is 55m MSL</i>
f) Slope analysis	<i>Considering the stability of rocks, ultimate pit slope proposed is 45°</i>
g) Will there be any significant land disturbance resulting in soil erosion, subsidence & natural drainage.	<i>Nil</i>
h) Access road to the site width and condition	<i>7.5m –Tarred Road</i>
i) Will there be any adverse impact on the aesthetics of the proposal site	<i>No</i>
3.Mining details	
a) Minimum and Maximum height of excavation.	<i>105m MSL- Maximum and 55m MSL- Minimum</i>
b) Life of mine proposed.	<i>27 years</i>
c) Underground mining if any	<i>Not applicable</i>

	proposed	
d)	Method of Mining	Open cast mining
e)	Distance from the adjacent quarry	No adjacent quarry within the 5 km radius of the lease area
f)	Cluster condition if any	No
g)	Has "No cluster certificate" submitted?	Yes
h)	Distance from nearby habitation	101.5 m-NW
i)	Distance from nearby forest, if applicable	Chennikarakadu Hill Reserve Forest 50 m E, Ayyazhi Mala Reserve 500 m NE
j)	Distance from protected area, Wildlife Sanctuary, National Park etc.	Chennikarakadu Hill Reserve Forest 50 m E, Ayyazhi Mala Reserve 500 m NE
k)	Distance from nearby streams/rivers/National Highway and Roads	Bharathapuzha River -2.5 Km -N
l)	Is ESA applicable? If so distance from ESA limit	Not applicable
m)	Has approved mining plan, prepared by RQP submitted?	Yes
n)	Capacity of production in TPA	2,00,000 MTA
o)	Details of mining process	The quarry is proposed to work with conventional open cast with bench system method with semi - mechanized mode of operation. Based on the mode and method, taking into the consideration of geological parameters of the charnockite body, the quarry pit will be so designed such that the height of the bench is kept about 5.00 m max.
4. Details of Project cost		
a)	Land cost	12 Crore
b)	Plant and Machinery	8 Crore
c)	Total Cost	Total Project cost- Rs 20 crore
V.	Financial	South Indian Bank-

	Statement including funding source and details of insurance etc.	
Management Plan	Air Pollution	No significant air pollution is expected as the mining operation is in wet stage. However during the summer water spraying suppresses the dust on roadways. The improvement of haulage road is the main remedy to suppress dust during transportation. Water sprinklers are provided to check the dusty road in the mining area. Dust released due to mining activity will be suppressed periodically by sprinkling of water, by engaging water tankers
	Water Pollution	Garland drains are provided at the mine site to regulate monsoon water and direct the same to the settling ponds / mine pit to contain the mine wash off and to avoid the same joining the adjoining surface water bodies / water courses.
	Noise	Plantation will be carried out all along the lease periphery, which acts as acoustic barrier for noise transmission.
	Solid Waste Management	Solid waste will be stacked at designated places during the quarry operations and will be utilized for reclamation work during mine closure plan.
	Eco-restoration	At the end of life of mine, the excavated pit will be 6.1230Ha., in which 5.3730Ha will be reclaimed with stacked dumping and overburden and rehabilitated by plantation
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	Not Applicable	

XI. Details of public complaint, if any	No
XII. Details of statutory sanction required	Not Applicable
XIII. If CRZ recommendation applicable?	Not Applicable
PART B	
Environment Impact Assessment and Mitigation Measures	
Impact on water	
a) Details of water requirement per day in KLD	<i>Total water requirement for project has to be estimated to be around 7KLD. About 0.76 KLD is required for domestic consumption, 4.0 KLD is required for dust suppression and 2.0 KLD is required for green belt development. The required water will be met from water pond and well outside the lease area.</i>
b) Water source/sources.	<i>water pond and well</i>
c) Expected water use per day in KLD.	<i>Total water requirement for project has to be estimated to be around 7KLD. About 0.76 KLD is required for domestic consumption, 4.0 KLD is required for dust suppression and 2.0 KLD is required for green belt development. The required water will be met from water pond and well outside the lease area.</i>
d) Details of water requirements met from water harvesting.	Around 4.0 KLD is required for dust suppression will be met from water harvesting pond
e) What are the impact of the proposal on the ground water?	The ground water level measured from the nearest well is about 12 m below the ground level. The ultimate depth of the working of the quarry is 40m MSL. Since the working is much above the general ground water table, it does not affect the ground water.
f) How much of the water requirement can be met from the recycling of treated waste water? (Facilities for liquid waste treatment)	Not Applicable
g) What is the incremental pollution load from waste water generated from the proposed activities?	Not Applicable
h) How is the storm water from within the site managed?	<ul style="list-style-type: none"> Storm water drains with silt traps will be suitably constructed all along the periphery of the pit area (Garland drains) to collect the run-off from the lease area and divert into the storm water pond/tanks proposed within the complex.

	<ul style="list-style-type: none"> • Appropriate channelization of storm water with channels of sufficient width • All measures will be taken not to disturb the existing drainage pattern adjacent to the other property
Impact on Biodiversity and Eco restoration Programmes	
a) Will the project involve extensive clearing or modification of vegetation (Provide details)	There will not be any loss of native species of genetic diversity as the quarry already exists and continuation of the same will not affect or loss of native species in general
b) What are 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
c) Is there any displacement of fauna – both terrestrial and aquatic. – If so what are the mitigation measures ? d) Presence of any endangered species or red listed category (in detail)	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	
a) What are the mitigation measures on generation of dust, smoke and air quality	<ul style="list-style-type: none"> • Laying of haul road as per the standards, black topping of permanent haul road and service road to avoid or eliminate air – borne dust. • To avoid the dust generation from the drilling operations, wet drilling method will be adopted. • Drill machines will be equipped with dust collectors. • Use of appropriate explosives for blasting and avoiding overcharging of blast holes.
b) Details of internal traffic management of the site.	<ul style="list-style-type: none"> • In case of long transportation the trucks after loading will be covered with tarpaulin sheets. • Speed of the vehicles will be maintained within the prescribed limits. • Trucks will not be over loaded and will be maintained to the body level.
c) Details of noise from traffic, machines and	<ul style="list-style-type: none"> • Proper maintenance of machinery, equipment's and improvement on design of machines. • Use of personal protective devices i.e., earmuffs and

	vibrator and mitigation measures	<p>earplugs by workers, who are working in high noise generating areas.</p> <ul style="list-style-type: none"> • Creation of wide green belt of dense foliage between mine areas and residential colonies
	d) Impact of DG sets and other equipments on noise and vibration and ambient air quality around the project site and mitigation measures	<ul style="list-style-type: none"> • Laying of haul road as per the standards, black topping of permanent haul road and service road to avoid or eliminate air – borne dust. • To avoid the dust generation from the drilling operations, wet drilling method will be adopted. • Drill machines will be equipped with dust collectors. • Use of appropriate explosives for blasting and avoiding overcharging of blast holes. • Controlled blasting techniques will be adopted
	e) Air quality monitoring in detail	Air quality is monitored from four different corners of the project site and results are found within the limits.
Energy Conservation		
	a) Details of power requirement and source of supply.	<i>Quarry operations are mainly by HEMM which are operated by HSD.</i>
	b) Details of renewable energy (non – conventional) used.	Not Applicable
Risk Management		
	a) Are there sufficient measures proposed for risk hazards in case of emergency such as accident at the site?	Yes
	b) Are proposals for fencing around the quarry satisfactory? c) Storage of explosives/hazardous substance in detail d) Facility for solid waste management	Yes
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?	Nil
	b) Will the proposal result in any changes to the demographic structure of local population. If so, provide details.	Nil
	c) Are the CSR proposals satisfactory. Give details A CSR component to a minimum of 2% of project cost should be carried out.	
	d) What are the projects benefits in terms of employment potential?	The quarrying activity will benefit local villages in both directly and in-directly. Direct beneficiary will be those who get employed in Quarry as skilled and unskilled workers
PART C		
	Details of NABET approved EIA Consultant engaged- Their name, address and accreditation details	Overseas Min-Tech Consultants QCI/NABET Accreditation serial no. NABET/EIA/1417/1A003
Summary and Conclusion		
	a) Overall justification for implementation of the project.	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. In addition to this 10% of the total area is converted to water pond. Thus the proposed project is not likely to affect the environment or adjacent ecosystem adversely.
	b) Explanation of how adverse impact have been mitigated.	<ul style="list-style-type: none"> • All working places will have safe means of access, safe working platform and exit. Persons working in hazardous dust prone area will be provided with dust mask. • Personal protective equipment's like respirators, ear plug, noise muff, helmet etc. Will be provided to the workers. • Proper unit design and engineering controls in order to

	<p>protect workers, including by control of process and fugitive emissions.</p> <ul style="list-style-type: none"> • Adequate arrangement of drinking water will be done. • Education & training will be provided to the workforce about facilities, protective equipment, risk associated, potential health effects, etc. • Display board will be provided showing the hazards associated and recommend precautionary measures
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I certify that the information given above are true to the best of my knowledge and belief. If any of the information is found incorrect or misleading, I agree that the proposal may be rejected.

Date:05/05/2017

Place: Chelakkara

Sd/-
Vishwanathan

2. The proposal was placed before 50th meeting of SEAC held on 30/31-12-2015 and decided to defer the item for the production of revised mining plan as per KMMC rule 2015. The proponent has submitted the documents regarding the revised mining plan. Hence the 52nd meeting of SEAC held on 8th and 9th February, 2016 appraised the matter in light of form-1, prefeasibility report, revised mining plan as per KMMCR-2015 and PowerPoint presentation. The proponent admitted that the quarry is currently in operation which amounts to violation. The Committee decided to defer the item for site visit and for submission of -

1. Document regarding ownership of the proposed land.
2. More realistic and need based social responsibility programme.
3. Image showing the whole property with clear demarcation of boundaries.

3. As the required clarification sought for has received the matter was placed in the 56th meeting of SEAC held on 06/07-06-2016. The Committee appraised the proposal based on Form I, Pre-feasibility report, Mining Plan & Field Inspection Report. The Committee decided to recommend for issuance of EC with the general conditions subject to the following specific conditions.

1. Over burden is partly stored in the eastern side in a planned manner. It must be provided with protective support.
2. The drainage from the quarry is currently directed to the SW corner pond.
3. The approach road to the quarry from the main road is not maintained at all. This road must be maintained in good motorable condition by the proponent.
4. Dust suppression mechanism must be in place.
5. Planting of trees needed.
6. Nearest house is only 103 m away.
7. Forest land is found only 50 m away from the lease area. Even though the land is classified as forest land, the areas abutting the lease area is devoid of any trees and is a continuation of rocky patches.

8. Protective fences is to be erected in the deep cuttings and all-around the lease area.
4. 55th meeting of SEIAA held on 16-07-2016 considered the proposal and the Authority noted that forest land is only 50 meters away from the lease area. SEAC incorporated it as a condition for recommending the case, whereas it ought to have been made a condition for rejecting the application. Authority rejected the proposal as it failed to satisfy the uniformly adopted criterion of having the minimum distance of 100 meters from the boundary of forest land.
5. Accordingly the matter was informed the proponent *via* vide letter No. 855/SEIAA/KL/2979/2014 dated 19-09-2016. The proponent represented that as per the revised approved mining plan they have submitted to SEIAA, the survey numbers included in the project are 138/(pt), 836(pt), 837(pt), 839(pt) and 847(pt) at Killimangalam Village, Thalappilly Taluk, Thrissur District for an area of 4.2649 hectares. They have also submitted revised Form 1 and requested to make needful changes in the rejection letter as per the revised Form 1 and revised approved mining plan.
6. The proposal was placed in the 61st meeting of SEIAA, held on 30th November 2016. The Authority decided to return the case to SEAC for re-appraisal in the light of the revised Form 1 and revised mining plan.
7. Meanwhile the proponent approached the Hon'ble High Court and vide judgment WP(C) 664 of 2017 (G) dt.12.01.2017 gave direction to the 3rd respondent (SEAC), to consider the matter as afresh in the light of the direction given by the judgement within a period of one month from the date of receipt of the judgement after hearing the petitioner.
8. The proposal was again considered in the 70th meeting of SEAC held on 4th and 5th April 2017 and decided that "Considering the environmental value of forest lands SEIAA as a general condition is allowing mining only after providing a buffer distance of 100m from such areas. The revised mining plan submitted by proponent also does not provide 100m buffer. Hence the Committee is of the view that proposal can be accorded EC without changing the above condition. Hence decided to recommend to issue the EC, reiterating the condition that the mining operations should be limited to the area at least 100 m from the forest boundary".
9. The Government in consultation with the State Environment Impact Assessment Authority, the department of Mining & Geology and Industries department issued the minutes of the Video Conference held on 28th April 2017 clarifying the doubts of DEIAA for mining of minor minerals vide letter no. 358/A3/2016/ID dt.09.05.2016 that 100 m distance shall be strictly insisted upon to grant for EC for mining of minor minerals from natural forest including Wild Life Sanctuaries.
10. The proposal was placed in the 68th meeting of SEIAA held on 12.05.2017. The Authority decided to issue Environmental Clearance subject to the general conditions and the

condition suggested by SEAC that the mining operations should be limited to the area at least 100 m from the forest boundary. An affidavit to this effect should be submitted before SEIAA within 10 days on the receipt of the EC Certificate for it to be operative. All the specific pre-mining conditions suggested by SEAC should also be strictly implemented before starting mining.

11. Environmental clearance as per the EIA notification 2006 is hereby accorded for the proposed Quarry project of Sri. K. R. Viswanathan, M/s Chelakkara Granite, Managing Partner, S/o Raman Nair, Kannimangalath House, Ooramana P.O., Ramamangalam, Ernakulam District-686663 in Sy. No. 138/(pt), 836(pt), 837(pt), 839(pt) and 847(pt) at Killimangalam Village, Thalappilly Taluk, Thrissur District, Kerala for an area of 4.2649 hectares subject to the specific conditions as recommended by SEAC in para 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.

12. 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) and (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.

13. 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.

14. 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. Proposal for enhancing the CSR component to a minimum of 2% of project cost may be submitted which may be implemented with due diligences.
- iii. Instances of violation if any shall be reported to the District collector, Thrissur to take legal action under the Environment (Protection) Act 1986.

- iv. The given address for correspondence with the authorised signatory of the project is Sri. K. R. Viswanathan, M/s Chelakkara Granite, Managing Partner, S/o Raman Nair, Kannimangalath House, Ooramana P.O., Ramamangalam, Ernakulam District-686663.

Sd/-

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

To,

Sri. K. R. Viswanathan,
Managing Partner,
M/s Chelakkara Granite,
S/o Raman Nair, Kannimangalath House,
Ooramana P.O., Ramamangalam,
Ernakulam District-686663

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, Thrissur
5. Secretary, Panjal Panchayat Office, Panjal P.O, Thrissur-679531
6. Chairman, SEIAA.
7. Website.
8. S/f
9. 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 this implementation 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

