



Validity expires on 15.08.2022

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. 1446/3 at Killanur Village, Mulankunnathukavu Panchayath, Thrissur Taluk, Thrissur District, Kerala State by Mr. Sony P. George, Managing Partner, M/s G.M. & Sons Granites - EC granted - Orders issued.

STATE ENVIRONMENTAL IMPACT ASSESSMENT AUTHORITY, KERALA

No. 944/SEIAA/EC1/4127/2015

Dated, Thiruvananthapuram, 16.08.2017

- Ref:1. Application received on 9.10.2015 from Mr. Sony B. George, Managing Partner, M/s G.M. & Sons Granites, Door no:1/490, Ponganamkad, Kurichikkara P.O, Thrissur, Kerala-680028.
2. Minutes of the 68th meeting of SEAC held on 20th & 21st February, 2017.
 3. Minutes of the 71st Meeting of SEAC held on 20th & 21st April 2017.
 4. Minutes of the 69th Meeting of SEIAA held on 1st June, 2017
 5. Affidavit received dated on 14.07.2017 from Mr. Sony P. George, M/s G.M. & Sons Granites

ENVIRONMENTAL CLEARANCE NO. 58 / 2017

Mr. Sony B. George, Managing Partner, M/s G.M. & Sons Granites, Door no:1/490, Ponganamkad, Kurichikkara P.O, Thrissur, Kerala-680028, vide his application received on 9.10.2015, has sought Environmental Clearance under EIA Notification, 2006 for the quarry project in Sy. No. 1446/3 at Killanur Village, Mulankunnathukavu Panchayath, Thrissur Taluk, Thrissur District, Kerala for an area of 0.8093 hectares. The project comes under Category B, Activity 1(a), (i) as per the Schedule of EIA Notification 2006 (since it is below 5 hectares) and as per O.M. No. L-11011/47/2011-IA.II(M) dated 18th May 2012 of Ministry of Environment and Forests.

Details of the project as furnished by the applicant are as follows:-

BASIC INFORMATION OF QUARRY

I. Project details		
1.	File No.	944/SEIAA/EC14127/2015
2.	Name /Title of the project	G. M & Sons Granites

3.	Name and address of project proponent.	Sony B. George, Managing Partner Door no:1/490, Ponganamkad, Kurichikkara P.O, Thrissur, Kerala-680028
4.	Owner of the land	Private land owned by firm
5.	Survey No. District/Taluk/ and Village etc.	1446/3 District – Thrissur, Taluk- Thrissur, Village – Killanur
6.	Details of period of lease or permit with number including the beginning and expiry date of lease/permit period (Copy to be attached)	No.56/CRP/12-13/GS/2426/C2/TDO/12 ,17.12.12-16.12.13 NO.96/CRP/13-14/GS/4247/C2/TDO/13, 17.02.14-16.02.15 NO.05/15-16/MM/QP/GS/838/C2/TDO/15 ,10.07.15-09.09.15
7.	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?	@17-12-2012 (b) NOT (c) after obtaining Ec & Permit
8.	Date of submission of Application	09/10/2015
9.	Brief description of the project.	The proposed project is a granite stone quarry within lease area of 0.8093 Ha. The proposed project is in Category B2, since the proposed mining area is less than 5 Ha. It is proposed to mine 1800 tons of granite stone per month with semi open cast method
10.	Details of Authorized Signatory and address for correspondence	Sony P. George Brahmakulam House, Naithalakkavilamma Temple Road, Pambur P.O Kuttur, Thrissur, Kerala 9447 190 197 sonygeorge.gm@gmail.com
II. Land Details		
11.	1. Extent of area in hectares	0.8093 Ha
12.	2. Is the property forest land/Govt. land/own land/patta	Own Land

	land	
13.	3. Quantity of top soil/over burden produced and managed	No Top soil / over burden is generated
14.	4. Latitude 5. Longitude	10° 34' 33.90" N - 10° 34' 38.20" N 76° 14' 35.90" E - 76° 14' 39.40" E
15.	6. Topography of land and elevation	Sloppy terrain with most of the area with exposed rock
16.	7. Slope analysis	Max.height of the site 130 msl and Lowest height is 112 msl
17.	8. Will there be any significant land disturbance resulting in soil erosion, subsidence & natural drainage.	No
18.	9. Access road to the site width and condition	The proposed site is well connected to the SJ colony road having 7 meter wide good condition, transportable. This is a public road which will be used for transportation of rocks with the help of trucks during mining operations. Nearest National Highway -- NH 47 located 5.17 km away.
19.	10. Will there be any adverse impact on the aesthetics of the proposal site	No
III. Mining details		
20.	a) Minimum and Maximum height of excavation.	Maximum height of the site is 130 msl Minimum height is 112 msl
21.	b) Life of mine proposed.	12 Years
22.	c) Underground mining if any proposed	No
23.	d) Method of Mining	Open cast method
24.	e) Distance from the adjacent quarry	There is no operational quarry now within 500 m radius
25.	f) Cluster condition if any	No
26.	g) Has "No cluster certificate" submitted?	No, 500 m radius quarry details certificate from District geologist submitted.
27.	h) Distance from nearby habitation	105 m
28.	i) Distance from nearby forest, if applicable	Chittanda Reserve Forest ,13.65km – N (Aerial)
29.	j) Distance from protected area, Wildlife Sanctuary, National Park etc.	Parambikulam Tiger Reserve ,61.72km – Aerial (SE)
30.	k) Distance from nearby	No streams or rivers nearby. National Highway

	streams/rivers/National Highway and Roads	NH 47, 5.17km SE direction	
31.	l) Is ESA applicable? If so distance from ESA limit	NA	
32.	m) Has approved mining plan, prepared by RQP submitted?	Yes	
33.	n) Capacity of production in TPA	21600 MTPA	
34.	o) Details of mining process	Open cast method of mining on single shift basis is proposed to excavate the rock. Loosening of the hard rock mass will be done through blasting. Blasting will be carried out by drilling, drilling will be done by using drilling machines operated hydraulic jackhammer. Rock breakers will be used to break down large bolder to small sized bolder. Excavators will be used for excavation & loading of the blasted materials in to tippers/trucks.	
IV. Details of Project cost			
35.	a) Land cost	96 Lakhs	
36.	b) Plant and Machinery	405 Lakhs	
37.	c) Total Cost	501 Lakhs	
38.	V. Financial Statement including funding source and details of insurance etc.	Source of funding = Own source & loan from bank Insurance = Insurance to the quarry workers provided by the insurance company	
39.	Management Plan	Air Pollution	Water sprinkling in regular intervals
		Water Pollution	No significant water pollution. Settling tanks used to settle the dust.
		Noise	Controlled blasting & timely maintenance of equipments
		Solid Waste Management	No solid waste generated

		Eco-restoration	Green belt construction in safety belt area, haul roads and reclaimed land areas	
40.	VI. Whether Environment Management Plan or Eco restoration Plan satisfactory?	Yes		
41.	VII. Does it suggest mitigation measures for each activity	Yes		
42.	VIII. If Pre-Feasibility Report (PFR) satisfactory	Yes		
43.	IX. Does it need public hearing	No		
44.	X. Details of litigation and Court verdict if any	Nil		
45.	XI. Details of public complaint, if any	Nil		
46.	XII. Details of statutory sanction required	Explosive license and other statutory licenses (panchayat, KSPCB etc) availed.		
47.	XIII. If CRZ recommendation applicable?	No		
PART B				
Environment Impact Assessment and Mitigation Measures				
Impact on water				
48.	a) Details of water requirement per day in KLD	Water needed about 15.5 KLD will be used for domestic purposes and dust suppression. The main source of water is from ground water and rain water harvesting. Drinking water consumption : 4.5 KLD Other purpose : 11 KDL a) Greenbelt Development- 3 KLD b) Dust Suppression- 8.0 KLD		
49.	b) Water source/sources.	Ground water and Rain water harvesting.		
50.	c) Expected water use per day in KLD.	15.5 KLD		
51.	d) Details of water requirements met from water harvesting.	About 10 KLD		
52.	e) What are the impact of the proposal on the ground water?	Mining in the proposed lease will not affect the ground water since mining will not reached or intersect the ground water table.		

53.	f) How much of the water requirement can be met from the recycling of treated waste water? (Facilities for liquid waste treatment)	No waste water treatment proposed since there is no significant waste water generated
54.	g) What is the incremental pollution load from waste water generated from the proposed activities?	No water pollution caused due to mining since no huge water required and so no significant waste water generated
55.	h) How is the storm water from within the site managed?	Storm water diverted & collected in settling tanks through garland drains. Check dams also will be constructed if needed
Impact on Biodiversity and Eco restoration Programmes		
56.	a) Will the project involve extensive clearing or modification of vegetation (Provide details)	No
57.	b) What are the measures proposed to minimize the likely impact on vegetation (details of proposal for tree plantation/ landscaping)	Green belt development in safety belt area, side of haul roads and reclaimed land areas and addressed in detail of the PFR in EC.
58.	c) Is there any displacement of fauna – both terrestrial and aquatic – If so what are the mitigation measures? d) Presence of any endangered species or red listed category (in detail)	No
Impact on Air Environment		
59.	a) What are the mitigation measures on generation of dust, smoke and air quality	Water sprinkling in regular intervals and green belt development
60.	b) Details of internal traffic management of the site.	There will not be heavy traffic since maximum 60 tons of material will only be transported per day.
61.	c) Details of noise from traffic, machines and vibrator and mitigation measures	Drilling, Blasting & machineries will generate noise, required precautions will be taken to maintain the noise pollution. Proper & timely maintenance for Machineries will be done to reduce noise pollution. Green belt construction in safety belt area and haul roads will also help

		in controlling the pollution.
62.	d) Impact of DG sets and other equipments on noise and vibration and ambient air quality around the project site and mitigation measures	Operation of machineries like DG will generate noise & small emission of dust & smoke, required precautions will be taken to maintain the noise pollution.
63.	e) Air quality monitoring in detail	Air Monitoring reports attached and also addressed in detail in the PFR of EC file
Energy Conservation		
64.	a) Details of power requirement and source of supply.	Only diesel operated machineries used for quarrying purpose. For Office purpose a small requirement will be met from state electricity grid
65.	b) Details of renewable energy (non – conventional) used.	Nil
Risk Management		
66.	a) Are there sufficient measures proposed for risk hazards in case of emergency such as accident at the site?	Yes
67.	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		
68.	1) Will the project cause adverse effects on local communities disturbance to sacred sites or other cultural values. What are the safe guards proposed?	No adverse effects on local communities, this project will make more employment & income generation for local people directly & Indirectly. CSR Project proposed will be implemented which will help in development of local people livings.
69.	2) Will the proposal result in any changes to the demographic structure of local population. If	No

	so, provide details.	
70.	3) Are the CSR proposals satisfactory. Give details	Agreed to set apart Rs.3 lakh (non-recurring) and Rs.3 lakh per annum (recurring) for CSR activities for the welfare of the local community in consultation with the local Panchayath.
71.	4) What are the projects benefits in terms of employment potential?	The project will make more employment & income generation for local people directly & Indirectly
PART C		
72.	Details of NABET approved EIA Consultant engaged-Their name, address and accreditation details	M/s Hubert Enviro Care Systems (p) Ltd. #18, 92nd Street, Ashok Nagar, Chennai -600 083 NABET accredited. Reaccreditation Certificate issued on 11.08.14 and listed under serial No. 77 of list revised on 05.05.2014
Summary and Conclusion		
73.	a) Overall justification for implementation of the project.	Granite Building Stone is the basic filling for Roads, Bridges and all other infrastructures like buildings. This project will improve the financial status of the common people around the project site. This project is environmentally compactable, financially viable and would be in the interest of construction industry thereby directly and indirectly benefiting the public.
74.	b) Explanation of how adverse impact have been mitigated.	No significant adverse impact.

2. The proposed project site falls within latitude 10° 34' 33.90" N - 10° 34' 38.20" N & longitude 76° 14' 35.90" E - 76° 14' 39.40" E. The land use classification as per revenue records is private own land dry land with only local vegetations / plantation. The lease area consists of 0.8093 hectares, which is private land. The proposed project is for quarrying of

21,600 MTA of building stone. Distance of the mining area from the nearest human settlement is recorded as more than 105 m. The total water requirement is about 15.5 KLD of which 4.5 KLD is for domestic & sanitary needs, 8.0 KLD for Dust suppression and 3.0 KLD Green belt Development. The main source of water is ground water and rain water harvesting. The total project cost is 501 Lakhs.

3. The proponent has submitted the Mining plan as per Kerala Minor Mineral Concession Rule, 2015 on 04.05.16 along with the application. The proponent was also submitted a Biodiversity Assessment Report, Corporate Social Responsibility (CSR) and Environmental Management Plan (EMP). The proposed project area is not adjacent to any of the ecologically sensitive features like National Parks, Biospheres Reserves, Sanctuaries, Elephant Corridors, Tiger reserves, flight paths of migrating fauna, etc. The project area does not fall into any ESA village.

4. The proposal was considered in the 68th meeting of SEAC, Kerala, held on 20th & 21st February 2017. Further to the intimation 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.3 lakh (non-recurring) and Rs.3 lakh per annum (recurring) for CSR activities for the welfare of the local community in consultation with the local Panchayat. The Committee deferred the item for field inspection.

Accordingly, the Subcommittee Members of SEAC carried out site inspection and the report is given below:

Field visit to the Quarry project site of M/S GM & Sons Granites located in Survey Nos. 1446/3 at Killanur Village, Mulankunnathukavu Panchayath, Thrissur Taluk, Thrissur District, Kerala State by Mr. Sony P. George, Managing Partner & Authorized signatory of G.M. & Sons Granites (File No. 944/SEIAA/EC14127/2015) was carried out on 04.03.2017 by the sub-committee of SEAC, Kerala, comprising Dr. Jayson E.A. and Dr. K.G. Padmakumar. The Proponent was present at the site.

Mr. Sony.B.George, Brahmakulam House, Naithalakkavilamma Temple Road, Pambur P.O., Kuttur, Thrissur, Kerala – Managing Partner & Authorized signatory of G.M. & Sons Granites, Killannur, Thrissur vide his application received on 9.10.2015, has sought Environmental Clearance under ELA Notification, 2006 for the quarry project in Sy. No. 1446/3 at Killanur Village, Mulankunnathukavu Panchayath, Thrissur Taluk, Thrissur District, Kerala for an area of 0.8093 hectares. The proposed project site falls within latitude 10° 34' 33.90" N - 10° 34' 38.20" N & longitude 76° 14' 35.90" E - 76° 14' 39.40" E. The land use classification as per revenue records is private own land dry land with only local vegetations / plantation. The lease area consists of 0.8093 hectares, which is private land.

The proposed project is for quarrying of 21,600 MTA of building stone. Distance of the mining area from the nearest human settlement is recorded as more than 105 m. The total water requirement is about 15.5 KLD of which 4.5 KLD is for domestic & sanitary needs, 8.0 KLD for Dust suppression and 3.0 KLD Green belt Development. The main source of water is ground water and rain water harvesting. The total project cost is 501 Lakhs.

Vazhani wildlife Sanctuary is at 12.17 km, Vazhani Dam at 10 km, and Poomala Dam is at 2.57 km. No litigation/complaint/cases are found against the quarry. Mining will make small change in land use pattern and the terrain is Sloppy with most of the area with exposed rock. Local vegetation is with native trees, climbers, grass, shrubs etc. No Nallas or streams in the proposed mining area. No significant liquid waste will be generated, only used oil from vehicles and machineries which will be handled as per Hazardous Waste Management Handling & Tran boundary Rule 2008. The proposed site is well connected to the SJ colony road having 7 meter wide in good condition. This is a public road which has to be used for transportation of rocks with the help of trucks during mining operations. Nearest National Highway – NH 47 located at 5.17 km away. There are no forest lands near to the proposed mining area and in the buffer zone of 10 km radius which can get affected by the mining. Chittanda Reserve Forest is at 13.65 km – N (Aerial) away from the lease boundary. The granite rocks are well exposed. Hence no top soil and waste will be generated. Green belt construction in safety belt area is needed and also in haul roads and reclaimed land areas. The mining activity will have localized impact and create physical change in the existing environment due to the change in the land use.

Based on an overall evaluation of the site, following points may be considered:

- The drainage from the quarry is to be de silted before allowing to go outside
- Dust suppression mechanism must be in place.
- In the absence of perennial streams in the vicinity, ultimate depth of mine will depend on the possible benches in the lease area.
- Vegetation is seen all around the quarry but must be maintained till the entire life of quarry.
- Other items from general conditions and CSR may be added. Recommended for approval.

5. The proposal was considered in the 71st meeting of SEAC held on 20th and 21st April 2017. The Committee appraised the proposal based on Form I, Pre-feasibility Report, 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 condition for mining.

1. The drainage from the quarry is to be de silted before allowing to go outside.
2. Dust suppression mechanism must be in place.

3. *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 spend Rs 3 lakhs each as recurring and non-recurring expenditure for taking up CSR activities in the locality in consultation with the local body.

6. The proposal was considered in the 69th meeting of SEIAA held on 1st June 2017. The Authority accepted the recommendation of SEAC in its 71st meeting held on 20th and 21st April 2017 and decided to issue EC subject to general conditions in addition to the following specific condition for mining.

1. *The drainage from the quarry is to be de silted before allowing to go outside.*
2. *Dust suppression mechanism must be in place.*
3. *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 conditions suggested by the inspection report should also be fulfilled. The premining conditions should be fulfilled before the mining is started. Project proponent has agreed that Rs.3 lakh (non-recurring) and Rs.3 lakh per annum (recurring) shall be set apart for CSR activities for the welfare of the local community in consultation with the local Panchayath. The CSR component (Non Recurring) should be enhanced to 2% of total project cost. An affidavit that all the above conditions shall be fulfilled, should be submitted before the issuance of EC.

7. The proponent has submitted an affidavit vide reference 5th 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. 1446/3 at Killanur Village, Mulankunnathukavu Panchayath, Thrissur Taluk, Thrissur District, Kerala by Mr. Sony.B. George, Managing Partner, M/s G.M. & Sons Granites, Door no:1/490, Ponganamkad, Kurichikkara P.O, Thrissur, Kerala-680028. for an area of 0.8093 hectares, subject to the specific conditions as recommended by SEAC in para 5 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.

8. 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.

9. 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.

10. 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, Thrissur to take legal action under the Environment (Protection) Act 1986.
- iii. The given address for correspondence with the authorised signatory of the project is by Mr. Sony.B.George, Managing Partner, M/s G.M. & Sons Granites, Brahmakulam House, Naithalakkavilamma Temple Road, Pambur P.O., Kuttur, Thrissur, Kerala-680013

Sd/-

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

To,
Mr. Sony P. George,
Managing Partner,
M/s G.M. & Sons Granites,
Door no:1/490, Ponganamkad,
Kurichikkara P.O,
Thrissur, Kerala-680028.

Copy to,

1. MoEF Regional Office, Southern Zone, Kendriya Sadan, 4th Floor, E&F Wing, II Block, Koramangala, Bangalore-560034.
2. The Additional Chief Secretary to Government, Environment Department, Government of Kerala.
3. The Director, Mining & Geology, Thiruvananthapuram -4.
4. The Member Secretary, Kerala State Pollution Control Board
5. The District Collector, Thrissur
6. The District Geologist, Thrissur
7. The Tahasildar, Killanur Village, Thrissur Taluk, Thrissur District, Kerala
8. Chairman, SEIAA.
9. Website.
10. S/f
11. O/c

Forwarded/By Order



Administrator, SEIAA

STATE ENVIRONMENT IMPACT ASSESSMENT AUTHORITY KERALA

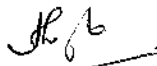
GENERAL CONDITIONS (for mining projects)

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. 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

