

**Proceedings of the District Environment Impact Assessment Authority Kozhikode**

Present : Sri.U.V.Jose. IAS, District collector & Chairman DEIAA, Smt Shamin Sebastian RDO and Member Secretary DEIAA, Sri Sunil Kumar DFO & Member Sri Sathyanathan. Member

Sub : DEIAA-Environmental clearance for the quarry project in Re Sy. No. 1 at Kattippara Village Kattippara Panchayath, Thamarassery Taluk Kozhikode District, Kerala Mr. Abdulla Koya Thangal C.P., Managing Partner, M/s Ruby Stone Crusher, PMP Estate, Chamal Post, Thamarassery, Kozhikode District, Kerala-673573 - E C Granted - Orders issued.

Ref : 1. Application dated 10.01.2017 from Sri. Mr. Abdulla Koya Thangal C.P., Managing Partner, M/s RUBY STONE CRUSHER, PMP Estate, Chamal Post, Thamarassery, Kozhikode District, Kerala-673573.  
2. Minutes of the 4<sup>th</sup> meeting of DEAC held on 12/05/2017  
3. Minutes of the 5<sup>rd</sup> meeting of DEAC held on 09/06/2017  
4. Minutes of the 3<sup>rd</sup> meeting of DEIAA held on 03/08/2017

**District Environment Impact Assessment Authority, Kozhikode**

No. 10/ DEIAA /KL/MIN/3970/2017.

Dated, Kozhikode: 23.09.2017

**ENVIRONMENTAL CLEARANCE NO 10./2017**

Mr. Abdulla Koya Thangal C.P., Managing Partner, M/s Ruby Stone Crusher, PMP Estate, Chamal Post, Thamarassery, Kozhikode District, Kerala-673573 vide his application received on 10.01.2017, has sought Environmental Clearance under EIA Notification, 2006 for the quarry project in Re Survey No. 1 at Kattippara Village Kattippara Panchayath, Thamarassery Taluk, Kozhikode District, Kerala for an area of 4.1943 hectares. The project comes under Category B2, Activity 1(1), (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-11(M) dated 18<sup>th</sup> May 2012 of Ministry of Environment and Forests. It is further categorized as Category B2 as per the O.M. No. J-13012/12/2013-IA-II (I) dated 24.12.2013 of Ministry of Environment and Forests, since the area of the project is below 5 hectares.

The proposed project site falls within Latitude 11°28'11.44"N to 11°28'20.09"N and Longitude 75°56'41.81"E to 75°56'51.90"E. The land use classification as per revenue records is private own land. The lease area consists of 4.1943 hectares. The current proposal is for the new building stone quarry project. The proposed project is for quarrying of 100000 MTA of building stone. The other details are as follows:

### I. Project details

1	File No.	DIA/KL/MIN/3970/2017.	
2	Name /Title of the project	Abdulla Koya Thangal C.P.	
3	Name and address of project proponent	Mr. Abdulla Koya Thangal C.P., Managing Partner, M/s Ruby Stone Crusher, PMP Estate, Chamal Post, Thamarassery, Kozhikode District, Kerala - 673573	
4	Owner of the land	Private Own Land	
5	Survey No. District/Taluk and Village etc.	Re Survey No. 1 at Kattippara Village Kattippara Panchayath, Thamarassery Taluk, Kozhikode District,	
6	Nature of the proposal-lease or permit with evidence	New Quarry Project	
7	Date of submission of Application	10.01.2017	
8	Brief description of the project	Quarry project with an area of 4.1943 hectares & Production capacity 100000 TPA	
9	Details of Authorized Signatory and address for correspondence	Mr. Abdulla Koya Thangal C.P., Managing Partner, M/s Ruby Stone Crusher, PMP Estate, Chamal Post, Thamarassery, Kozhikode District, Kerala - 673573	
<b>II Land Details</b>			
10	a) Extent of area in hectares	4.1943 hectares	
11	b) Is the property forest land/Govt. land/own land/ patta land	Private own land	
12	c) Quantity of top soil/over burden produced and managed	Topsoil : 17,589 cubic meter Overburden : 9,772 cubic meter	
13	d) Latitude and Longitude	Latitude (N)	11°28'11.44"N to 11°28'20.09"N
		Longitude (E)	75°56'41.81"E to 75°56'51.90"E
14	e) Topography of land and elevation	Part of the proposed land is exposed rock and the remaining land is covered with native trees, shrubs, herbs, grass, climbers, bushes etc. The topography of the lease area is hilly. The highest elevation of the lease area is 175 m MSL and lowest is 130 m MSL. As the proposed area is hill rock, the drainage of the lease area is towards East.	
15	f) Slope analysis	As the proposed area is hill rock, the drainage of lease area is towards East.	

16	g) Will there be any significant land disturbance resulting in soil erosion, subsidence & natural drainage.	Due care will be taken to provide channel all around the foot hill to collect run off and also to avoid soil erosion. There is no danger of flood or inundation ,as the proposed working is above the normal ground level. The area is not susceptible to flood.
17	h) Access road to the site width and condition	7m wide road
18	i) Will there be any adverse impact on the aesthetics of the proposal site	No, the land used will be fully reclaimed and rehabilitated by backfilling the pond and plantation. Plantation and forestation will add to the improvement in environment and aesthetic beauty of the area.

### III. Mining details

19	a) Minimum and Maximum height of excavation	The exploitation of mineral is being done from 175 m to 125m MSL in conceptual phase.
20	b) Life of mine proposed	About 22 years
21	c) Underground mining if any proposed	No underground mining proposed and the working will be carried out by opencast semi-mechanized method as per the approved Mining Plan.
22	d) Method of Mining	The working will be carried out by opencast semi-mechanized method as per the approved Mining Plan.
23	e) Distance from the adjacent quarry	There is no working quarry located within 500m radius of the proposed quarry.
24	f) Cluster condition if any	No cluster condition
25	g) Has "No cluster Certificate" submitted?	Cluster certificate issued by District Geologist is already submitted with EC Application.
26	h) Distance from nearby habitation	Nearest habitation is at 155 m towards East.
27	i) Distance from nearby forest, if applicable	None within the study area
28	j) Distance from protected area, Wildlife Sanctuary National Park etc.	None within the study area
29	k) Distance from nearby streams/ rivers/ National Highway and Roads	<u>Water Bodies:</u> Poonoor puzha River, 6 km, NW Engapuzha thodu, 5 km, E Kakkayam Dam, 14 km, N <u>NH / Highway :</u> NH-212, Engapuzha about 3 km, East and SH - 34, Chungam, about 7 km, South
30	l) Is ESA applicable? If so distance from ESA limit	Not falling in ESA.

31	m) Has approved mining plan, prepared by RQP submitted?	Yes, Submitted along with the application
32	n) Capacity of production in TPA	1,00,000 TPA
33	o) Details of mining process	The mining will be done by open cast semi-mechanized method of mining. The bench height and width will be maintained 5 m. Excavated material is transported to the crusher unit existing near the complex for further processing. The ultimate depth of mine workings is estimated to reach up to 125m MSL.
<b>IV. Details of Project cost</b>		
34	a) Land cost	2 Crores
35	b) Plant and Machinery	1 Crores
36	e) Total Cost	3 Crores
37	V. Financial Statement including funding source and details of insurance etc.	Source of funding = Own fund and Bank Loan.
38	Management Plan	<p style="text-align: center;">Air Pollution</p> <p>Mining activities will generate certain quantities of dust during drilling, blasting, loading and transportation operations. The following measures will be taken to mitigate the fugitive dust from different operations.</p> <ul style="list-style-type: none"> <li>• Laying of haul road as per the standards, black topping of permanent haul road and service road to avoid or eliminate air – borne dust.</li> <li>• To avoid the dust generation from the drilling operations, wet drilling method will be adopted.</li> <li>• Drill machines will be equipped with dust collectors.</li> <li>• Use of appropriate explosives for blasting and avoiding overcharging of blast holes.</li> <li>• Controlled blasting techniques will be adopted.</li> <li>• Watering of haul road and other road at regular intervals.</li> <li>• Provision of dust filters/ mask to workers working at highly dust prone and affected areas.</li> </ul>

		<ul style="list-style-type: none"> <li>• Provision of green belt all along the periphery of the lease area.</li> <li>• Periodical monitoring of ambient air quality in and around the lease area.</li> </ul> <p>The extracted mineral will be transported from the quarry to the end user by adopting following measures so as to minimize dust emissions.</p> <ul style="list-style-type: none"> <li>• In case of long transportation the trucks after loading will be covered with tarpaulin sheets.</li> <li>• Speed of the vehicles will be maintained within the prescribed limits.</li> <li>• Trucks will not be over loaded and will be maintained to the body level</li> </ul>
	Water Pollution	Provision of storm water collection pond with an appropriate capacity. The water requirement for sprinkling on sources of dust emission, on roads, landscaping etc. Can be met from the stored rainwater in the pond.
	Noise	<p>The major noise generating source from the proposed activity is working machinery, drilling, blasting and plying of vehicles. The following control measures are to be undertaken to bring down the noise levels:-</p> <ul style="list-style-type: none"> <li>• Proper maintenance of machinery, equipments and improvement on design of machines.</li> <li>• Use of personal protective devices i.e., earmuffs and earplugs by workers, who are working in high noise generating areas.</li> <li>• Creation of wide green belt of dense foliage between mine areas and residential colonies.</li> <li>• Proper training to personnel to create awareness about adverse noise level effects.</li> <li>• Planned noise monitoring at suitable locations in the plant and outside location for proper effective remedial actions.</li> </ul>
	Solid Waste Management	<p><u>Topsoil Management</u></p> <p>The topsoil excavated from the quarry will be dumped / stacked separately at pre-determined place and subsequently will be utilized in</p>

		<p>spreading over reclaimed areas for plantation as part of eco-restoration. Precautions will be taken to limit the height of the topsoil dump / stacked to 5 to 6 meters in order to preserve its fertility and shelf life. It will be suitably protected from soil erosion and infertility by planting fodder grass and leguminous plants during temporary storage.</p> <p style="text-align: center;"><u>Overburden Management</u></p> <p>This waste will be utilized within the pit for lying of haul roads. At the end use, OB can be reutilized as soil base for plantation.</p>
		<p>Eco-restoration</p> <p>The year wise programme of eco-restoration for life of mine will be made and about 3,700 trees will be planted in an area of 3.6736 ha.</p>
39	VI. Whether Environment Management Plan or Eco restoration Plan satisfactory?	Yes, detailed Project-Feasibility Report (PFR) with approved mining plan is already submitted with E.C. Application.
40	VII. Does it suggest mitigation measures for each activity	Yes and the detailed PFR is already submitted with E.C. Application.
41	VIII. If pre-feasibility report (PFR) satisfactory	Detailed Pre-Feasibility Report (PFR) is already submitted with E.C. Application.
42	IX. Does it need public hearing	Not Applicable
43	X. Details of litigation and Court verdict if any	No litigation pending.
44	XI. Details of public complaint, if any	None
45	XII. Details of statutory sanction required	<ul style="list-style-type: none"> <li>a. Quarrying Lease</li> <li>b. NOC from Pollution Control Board</li> <li>c. Environment Clearance from DEIAA/SEIAA</li> <li>d. NOC from Explosive Dept.</li> <li>e. D &amp; O License from the LSGD</li> </ul>
46	XIII. If CRZ recommendation applicable?	Not Applicable

PART B

Environment Impact Assessment and Mitigation Measures

Impact on water

47	a) Details of water requirement per day in KLD	The total water requirement is about 16 KLD in which 2 KLD is for domestic which would be sourced from open well, 12 KLD for dust suppression as well as ancillary unit and 2 KLD for plantation purposes and will be sourced from storm water pond.
48	b) Water source/sources	2 KLD is for domestic which would be sourced from open well, 12 KLD for dust suppression as well as ancillary unit and 2 KLD for plantation purposes and will be sourced from storm water pond.
49	c) Expected water use per day in KLD	16 KLD
50	d) Details of water requirements from water harvesting	12 KLD for dust suppression system in mine as well as ancillary unit (Crusher / M sand Unit) and 2 KLD for plantation purposes and will be sourced from storm water pond.
51	e) What are the impact of the proposal on the ground water?	No significant impact envisaged on ground water due to the mining project.
52	f) How much of the water requirement can be met from the recycling of treated waste water? (Facilities for liquid waste treatment)	Nil
53	g) What is the incremental pollution load from waste water, generated from the proposed activities?	The sewage to a tune of 1.60 KLD generated from the mine office will be diverted to the septic tank followed by soak pit.
54	h) How is the storm water from within the site managed?	<ul style="list-style-type: none"> <li>* Storm water drains with silt traps will be suitably constructed all along the periphery of the pit area to collect the run-off from the lease area and divert into the storm water pond /tanks proposed within the complex.</li> <li>*All measures will be taken not to disturb the existing drainage pattern adjacent to the other property.</li> <li>*De-siltation traps and storm water collection pond proposed for silt removal.</li> </ul>

\*The storm water collected from the lease area will be utilized for dust suppression on haul roads, plantation within the premises etc.

### Impact on Biodiversity and Eco restoration Programmes

55	a) Will the project involve extensive clearing or modification of vegetation (Provide details)	Due to the mining activities, there will be loss of some native species and vegetation. However, some of these species will be planted at the end use for eco-restoration.						
56	b) What are the measures proposed to minimize the likely impact on vegetation (details of proposal for tree plantation /landscaping)	<p>The year wise programme of eco-restoration for the life of mine will be made and about 3,700 trees will be planted in an area of 3.6736 ha.</p> <p>Ecological restoration for the mined area by plantation of the species as per the time schedule suggested below: -</p> <table border="0"> <tr> <td>First Six months</td> <td>-- Herbs &amp; grass</td> </tr> <tr> <td>Next Six months</td> <td>-- Shrubs</td> </tr> <tr> <td>Next Six months onwards</td> <td>-- Trees</td> </tr> </table> <p>Selection of species is based on High Dust Capturing, Soil Holding Capacity, ground water recharge capacity etc. More focus is given for medicinal plants.</p>	First Six months	-- Herbs & grass	Next Six months	-- Shrubs	Next Six months onwards	-- Trees
First Six months	-- Herbs & grass							
Next Six months	-- Shrubs							
Next Six months onwards	-- Trees							
57	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)	<p>Not applicable</p> <p>No endangered species found at site</p>						

### Impact on Air Environment

58	a) What are the mitigation measures on generation of Dust, smoke, and air quality	Details already provided at EMP section at Sr. No. 38 above.
59	b) Details of internal traffic management of the site	Designated space will be provided for parking of truck / tipper within the site. For the purposes of mining activities, existing roads are sufficient. However, haul road will be suitably developed within the proposed area. Speed of the vehicles will be maintained within the prescribed limits (Speed Governor fitted).

60	c) Details of noise from traffic, machines and vibrator and mitigation measures	Details already provided at EMP section at Sr. No. 38 above.
61	d) Impact of DG sets and other equipments on noise and vibration and ambient air quality around the project site and mitigation measures	Details provided at EMP section at Sr. No. 38 above and air, noise and water sampling reports were already submitted with EC Application.
62	e) Air quality monitoring in detail	Details provided at EMP section at Sr. No. 38 above and air, noise and water sampling reports were already submitted with EC Application.
<b>Energy Conservation</b>		
63	a) Details of power requirement and source of supply.	The total power requirement will be 75 kW, which will be drawn from diesel engine. Fuel Quantity – 16 to 20 litre/ hr.
64	b) Details of renewable energy (non-conventional) used.	We will promote renewable energy resources.
<b>Risk Management</b>		
65	a) Are there sufficient measures proposed for risk hazards in case of emergency such as accident at the site?	Detailed Environment Management Plan is already submitted with E.C. Application.
66	b) Are proposals for fencing around the quarry satisfactory?	Barbed wire fencing will be done all around the quarry site.
	c) Storage of explosives/ hazardous substance in detail	The stone quarry mine will result in increase in frequency of blasting for mining the mineral. However, controlled blasting with optimum charge of holes will be carried out to loosen the rock. Explosion hazards are envisaged due to mishandling of explosives. Explosives will be handled with utmost care in compliance of conditions imposed by Chief Controller of Explosive & Metalliferous Mines Regulation, 1961

	d) Facility for solid waste management	Top soil and over burden generated from the site will be stored separately. on earmarked place and will be used for eco-restoration and internal road development.
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### Socio Economic Impacts

67	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			
68	b) Will the proposal results in any changes to the demographic structure of local population, if so, provide details	The mining project will directly / indirectly develop the area by providing employment opportunities. With the proposed development in and around the area there will be many supporting facilities/ infrastructure eventually leading to the development of the area.			
69	c) CSR components suggested	Sl. No	Area of Intervention	Recurring Expense	Nonrecurring Expense
		1	Promotion of Education	1,70,000	3,95,000
		2	Environmental Sustainability	Nil	1,50,000
		3	Infrastructure Development	1,50,000	Nil
			Health Care	1,70,000	Nil
			<b>Total</b>	<b>4,90,000</b>	<b>6,20,000</b>
70	d) What are the projects benefits in terms of employment potential?	Due to the mining activity and due to the attached ancillary unit, there will be workers attracted to the project area. It is proposed to employ 27 persons in the project.			

### Part-C

71	Details of NABET approved EIA Consultant engaged-Their name, address and accreditation details.	M/s Environmental Engineers & Consultants Pvt. Ltd. (NABET Accredited Consultant Organization)  <i>Head Office</i> :- A1-198, Janak Puri, New Delhi. <i>Branch Office</i> :- C-306, Kanchanjunga Apartments, Palarivattom P.O., Kochi, Kerala.
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### Summary and Conclusion

72	a) Overall justification for implementation	It is predicted that socio-economic impact due to this project will positively increase the chance of more employment opportunities for local inhabitants. There are no Resettlement and Rehabilitation issues involved
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	of the project	in this project. The project infrastructures will be of use to people of the area. The revenue of the State Govt. will be definitely increasing due to the proposed activity. The entire project area is devoid of any endangered flora and fauna. It is proposed to reclaim the land and develop green cover for eco-restoration with native species to a maximum possible extent. Additionally, an area is earmarked outside the proposed mining area for compensatory mass plantation. Also, a storm water pond is proposed outside the mining area for storage of rain water and for its subsequent use so as to conserve fresh water consumption. Thus the proposed project is not likely to affect the environment or adjacent ecosystem adversely.
73	b) Explanation of how adverse impact have been mitigated.	Detailed Pre-Feasibility Report (PFR) with approved Mining Plan is already submitted with E.C. Application. Further, details are provided at EMP section at Sr. No. 38 above.

2. The proposal was considered in the 3<sup>rd</sup> meeting of DEAC held on 03.08.2017. The minutes of the said meeting are as follows; Further to the intimation of DEAC, the proponent along with the RQP was present in the meeting and RQP made a power point presentation of 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 the Form I application and decided to defer the item for site visit.

Field visit to the quarry project site of Mr. Abdulla Koya Thangal C.P., Managing Partner, M/s Ruby Stone Crusher, PMP Estate, Chamal Post, Thamarassery, Kozhikode District, Kerala-673573 was carried out on 25.05.2017 by Sri. T. Mohanan, Member Secretary; DEAC along with Sri. Babu Thomas, Exe Engineer Minor Irrigation Department, Dr. Dinesan VP, Scientist, CWRDM, District Officer Ground Water Department, Asst. Conservator of Forest, Social Forestry Division and Environmental Engineer Kerala State Pollution Control Board, Kozhikode. The proponent was present at the site at the time of site visit.

The project is located at about 2km North West of Chammal. This quarry lease area form part of a hillock exposing hard rock. The approach road is the private road. Boundary pillars of this plot are erected and numbered. In the area proposed for quarry is an elevated ridge with overall slope to NW. This is an uncultivated land that exposes hard rock with few patches of OB and top soil of variable thickness.

*The quarry has been recommended for EC after considering the following points:-*

1. *The entire area proposed for quarry should be fenced all around.*
2. *The limited top soil and OB need proper storage area on the lower part and provided with protective walls.*
3. *The approach road needs widening and surfacing*
4. *The limited patch of natural vegetation seen adjacent to the proposed lease area should be preserved as such.*

5. The entire quarry should be provided with catch water drain all around. The storm water from the upper slopes to be channelized into the drain and clarified before it is let out.
6. The required quantity of water for the project shall be collected by rain water harvesting
7. A RWH structure should be created for the storage of rain water.
8. Details of CSR to be provided as promised in the DEAC meeting.

3. The proposal along with field visit report was again placed in the 5<sup>th</sup> DEAC meeting held on 9<sup>th</sup> June 2017. The Committee after examining the mining plan, prefeasibility report, field inspection report by subcommittee and all other documents submitted, decided to recommend for issuance of EC subject to general conditions along with the following specific conditions.

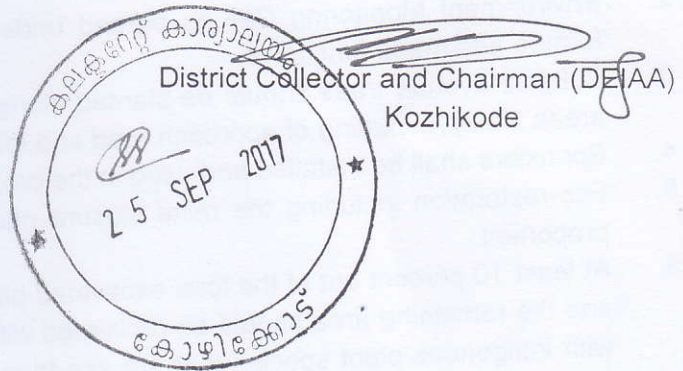
1. Should be fenced all around.
2. The limited patch of natural vegetation seen adjacent to the proposed lease area should be preserved as such.
3. The entire quarry should be provided with catch water drain. The storm water from the upper slopes to be channelized into the drain and clarified before it is let out.
4. A RWH structure should be created for the storage of rain water.
5. The proponent agreed to set apart Rs. 6.2 lakh (non-recurring) and Rs 4.9 lakh (recurring) per year for a period of next 5 years for the welfare of the local community. The proponent also agreed to spend this amount in consultation with the local Panchayath.
6. The proposal was considered by the Authority in its 3<sup>rd</sup> meeting held on 03.08.2017.

The authority resolved to issue Environmental Clearance on condition that quarrying should be started only after fulfilling the pre mining specific conditions No.1 to 4

4. 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 conditions and the undertakings subject to all the mining features, Environmental Management Plans as undertaken in the Mining Plan and EMP submitted to DEIAA will be deemed to be part of this proceedings as conditions as undertaken by the proponent as if incorporated herein.
5. Validity of the Environmental Clearance will be five years from the date of this clearance, subject to inspection by DEIAA 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 the public.
6. Compliance of the conditions herein will be monitored by the State Environment Impact Assessment Authority or its authorized offices and also by the regional office of the Ministry of Environment & Forests.

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.

- i. Instances of violation if any shall be reported to the District Collector, Kozhikode to take legal action under the environment (Protection) Act 1986.
- ii The given address for correspondence with the authorised signatory of the project is Mr. Abdulla Koya Thangal C.P., Managing Partner, M/s Ruby Stone Crusher, PMP Estate, Chamal Post, Thamarassery, Kozhikode District, Kerala-673573



To

Mr. Abdulla Koya Thangal C.P.,  
Managing Partner,  
M/s Ruby Stone Crusher,  
PMP Estate, Chamal Post,  
Thamarassery,  
Kozhikode District, Kerala-673573

Copy to:

1. MoEF Regional Office, Southern Zone, Kendriya Sadan, 4<sup>th</sup> Floor,  
E&F Wing, II Block, Koramangala, Bangalore-560034
2. The Additional Chief Secretary to government,  
Environment Department, Government of Kerala.
3. Director, Mining & Geology, Thiruvananthapuram-4
4. Secretary, Kattippara Grama Panchayath, Kattippara P.O, Kozhikode. 673573
5. S/F

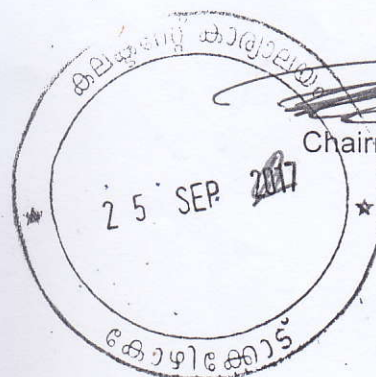
DISTRICT ENVIRONMENT IMPACT ASSESSMENT AUTHORITY KOZHIKODE,  
GENERAL CONDITIONS (for mining projects)

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. Sprinklers shall be installed and used in the project site to contain dust emissions.
5. Eco-restoration including the mine closure plan shall be done at the own cost of the project proponent.
6. 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 F.C
7. Corporate Social Responsibility (CSR) agreed upon by the proponent should be implemented
8. The lease area shall be fenced off with barbed wires to a minimum height of 4 ft around, before starting of mining. All the boundary indicators (boards, stores, markings, etc.) shall be protected at all times and shall be conspicuous.
9. Warning alarms indicating the time of blasting (to be done at specific timings) has to be arranged as per stipulations of Explosive Department.
10. Control measures on noise and vibration prescribed by KSPCB should be implemented
11. Quarrying activities should be limited to day time as per KSPCB guidelines/specific conditions.
12. Blasting should be done in a controlled manner as specified by the regulations of Explosives Department or any other concerned agency.
13. A licensed person should supervise/control the blasting operations.
14. Overburden materials should be managed within the site and used for reclamation of mine pit as per mine closure plan/specific conditions.
15. Height of benches should not exceed 6m and width should not be less than 5m if there is no mention in the mining plan/specific condition.
16. Mats to reduce fly rock blast to a maximum of 10 PPV should be provided.
17. 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.
18. The workers on the site should be provided with the required protective equipment such as ear muffs, helmet, etc.
19. Garland drains with clarifiers to be provided in the lower slopes around the core area to channelize storm water.
20. The transportation of minerals should be done in covered trucks to contain dust emissions.

21. The proponent should plant trees at least 5 times of the loss that has been occurred while clearing the land for the project.
22. Disposal of spent oil from diesel engines should be as specified under relevant Rules/Regulations.
23. Explosives should be stored in magazines in isolated place specified and approved by the Explosives Department.
24. 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
25. 100 m buffer distance should be maintained from forest boundaries.
26. Consent from Kerala State Pollution Control Board under Water and Air Act(s) should be obtained before initiating mining activity.
27. 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.
28. 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 proponent shall apply and get the approval of this Authority.
29. 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.
30. 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.
31. 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 District Environment Impact Assessment Authority (DEIAA) office Kozhikode and may also be seen on the website of the Authority at [www.environmentclearance.nic.in](http://www.environmentclearance.nic.in) 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.
32. A copy of the clearance letter shall be sent by the proponent to concerned Gramapanchayat/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.

33. 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 State Environment Impact Assessment Authority (SEIAA) office and also to the District Environment Impact Assessment Authority (DEIAA) office.
34. 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.
35. 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.
36. No change in mining technology and scope of working should be made without prior approval of the DEIAA, No further expansion or modifications in the mine shall be carried out without prior approval of the DEIAA, as applicable.
37. 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.
38. 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.
39. 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 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.
40. 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 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 de silted particularly after monsoon and maintained properly.
41. Effective safeguard measures such as regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of PM<sub>10</sub> and PM<sub>2.5</sub> such as haul Road, loading and unloading points and transfer points, it shall be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central Pollution Control Board in this regard.
42. 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.

43. Measures should be taken for control of noise levels below 85 dBA in the work environment
44. 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
45. The funds earmarked for environmental protection measures and CSR activities should be kept in separate account and should not be diverted for other purposes. Year wise expenditure should be reported to the District Environment Impact Assessment Authority Kozhikode (DEIAA) office.
46. The Regional Office of SEIAA & 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.
47. 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.
48. 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
49. The SEIAA may revoke or suspend the order, for non implementation of any of the specific conditions or the implementation of any of the above conditions is not satisfactory. The DEIAA reserves the right to alter/modify the above conditions or stipulate any further condition in the interest of environment protection.
50. 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.
51. This order is valid for a period of 5 years or the expiry date of quarrying lease period issued by the Government of Kerala, whichever is earlier.
52. 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.
53. The mining operation shall be restricted to above ground water table and it should not intersect ground water table.
54. All vehicles used for transportation and within the mines shall have 'PUC' certificate from authorized pollution testing centre. Washing of all vehicles shall be inside the lease area.
55. 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
56. 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 DEIAA.
57. Occupational health surveillance programme of the workers should be under taken periodically to observe any contractions due to exposure to dust and take corrective measures, if needed.
58. The environmental clearance liable to be cancelled if the said land is found in porāmbokku, surplus land, etc



Chairman, DEIAA Kozhikode