



Validity expires on 15.09.2022

***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 building stone quarry project in Sy. No. 148/6, 145/6, 145/5, 145/9, 145/3, 148/3, 145/7, 148/4, 145/6-1, 148/10, 145/8, 145/3-1, 145/2, 146/8, 150/1-1, 148/9 at Ezhumattoor Village & in Sy.No.158/3, 159/14-1, 159/15 of Kottangal Village, Mallappally Taluk, Pathanamthitta District, Kerala by Sri. K.A. Thomas, M/s T.M. Constructions. - EC granted – Orders issued.

STATE ENVIRONMENTAL IMPACT ASSESSMENT AUTHORITY, KERALA

No. 899/SEIAA/EC4/ 3460/2015

Dated, Thiruvananthapuram, 16.09.2017

- Ref:
1. Application received on 25.08.2015 from Sri.K.A.Thomas
 2. Minutes of the 55th meeting of SEAC held on 10th, 11th & 20th of May, 2016.
 3. Minutes of the 60th meeting of SEAC held on 28th & 29th July, 2016
 4. Minutes of the 64th Meeting of SEAC held on 16th & 17th November 2016
 5. Minutes of the 62nd meeting of SEIAA held on 23rd December 2016
 6. Minutes of the 67th meeting of SEIAA held on 28th April 2017
 7. Minutes of the 70th meeting of SEIAA held on 16th June 2016
 8. Affidavit received on 02.08.2017 from Sri.K.A.Thomas

ENVIRONMENTAL CLEARANCE NO.66/2017

Sri.K.A. Thomas, Managing Partner, MMC No. XX/466, (opp. Aramana Complex) Muvattupuzha, Ernakulam Kerala-686661 vide his application received on 25/08/2015, has sought Environmental Clearance under EIA Notification, 2006 for proposed building stone quarry project in Sy. No. 148/6, 145/6, 145/5, 145/9, 145/3, 148/3, 145/7, 148/4, 145/6-1, 148/10, 145/8, 145/3 1, 145/2, 146/8, 150/1-1, 148/9 of Ezhumattoor Village & in Sy.No.158/3, 159/14-1, 159/15 at Kottangal Village, Mallappally Taluk, Pathanamthitta District, Kerala for an area of 4.54.91 hectares. The project comes under Category B2, 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.

Details of the project as furnished by the applicant are as follows;

BASIC INFORMATION OF QUARRY

PART A

Project details		
1.	File No.	899/ EC4/3460/2015
2.	Name /Title of the project	Proposed Stone Quarry Project by M/s. T.M. Constructions.
3.	Name and address of project proponent.	Mr. K.A. Thomas M/s. T.M. Constructions, MMC No: XX/466, opp. Aramana Complex, Muvattupuzha, Ernakulam District, Kerala – 686 661
4.	Owner of the land	K.A. Thomas, Pyas Thomas, Yesudas Thomas, Ullas Thomas, Alex Mathew, George Mathew, Jose Praksh, Sajeev Jacob & Reema Sajeev,
5.	Survey No. District/Taluk/ and Village etc.	148/6, 145/6, 145/5, 145/9, 145/3, 148/3, 145/7, 148/4, 145/6-1, 148/10, 145/8, 145/3-1, 145/2, 146/8, 150/1-1, 148/9 of Ezhumattoor Village & in Sy.No.158/3, 159/14-1, 159/15 of Kottangal Village, Mallappally Taluk, Pathanamthitta District, Kerala
6.	Nature of the proposal – lease or permit with evidence.	Quarry Permit No: 6/2014 -15/DOPTA/M/2014 dated 07.04.2014.
7.	Date of submission of Application	25.08.2015
8.	Brief description of the project.	Building stone quarry in an area of 4.54.91 Hectares at Ezhumattoor & Kottangal Village, Mallappally Taluk, Pathanamthitta District, Kerala with maximum rate of production of 48569 m ³ per annum
9.	Details of Authorized Signatory and address for correspondence	Mr. K.A. Thomas M/s. T.M. Constructions, MMC No: XX/466, opp. Aramana Complex, Muvattupuzha, Ernakulam District, Kerala
Land Details		
10.	a) Extent of area in hectares	4.54.91 Ha
11.	b) Is the property forest land/Govt. land/own land/patta land	Own Patta Land
12.	c) Quantity of top soil/over burden produced and managed	1. Top soil - 140085 M.T 2. Over burden - 11827 M.T
13.	d) Latitude and Longitude	09°25'.39.49"N - 09°25'.53.36"N 76°42'38.47"E - 76°42'46.37"E
14.	e) Topography of land	Hilly Terrain & 109-89 m RL

	and elevation	
15.	f) Slope analysis	The lease area is sloping towards north west side.
16.	g) Will there be any significant land disturbance resulting in soil erosion, subsidence & natural drainage.	Due to excavation, significant land disturbance will occur.
17.	h) Access road to the site width and condition	Width of the access road to site is 8m
18.	i) Will there be any adverse impact on the aesthetics of the proposal site	Does not arise.
Mining details		
19.	a) Minimum and Maximum height of excavation.	3m Minimum & 15m Maximum
20.	b) Life of mine proposed.	5 years
21.	c) Underground mining if any proposed	No
22.	d) Method of Mining	Open Cast, Semi mechanized mining
23.	e) Distance from the adjacent quarry	0.6 km
24.	f) Cluster condition if any	No
25.	g) Has "No cluster certificate" submitted?	No
26.	h) Distance from nearby habitation	Ezhumattoor – 1 km
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	Manimala River – 2 km National Highway 220 (Kottayam – Kumily road) - 14.0 km, N
30.	l) Is ESA applicable? If so distance from ESA limit	Not Applicable
31.	m) Has approved mining plan, prepared by RQP submitted?	The approved mining plan is prepared by RQP & it is submitted.
32.	n) Capacity of production in TPA	121423 M.T per Annum
33.	o) Details of mining	Open cast method of mechanized mining will be adopted

	process	to extract rough stones of required size from the mine area. While opening a new mine, several long term aspects of mining should be considered like semi-permanent roads, planning the development work, formation of working faces, approach road to various benches for movement of dumpers, selection and recruitment of man power, machineries, construction of infrastructures, selection of dump sites, stacking yards for undressed blocks, finished products and other facilities.	
Details of Project cost			
34.	a) Land cost	21.7 Lakhs	
35.	b) Plant and Machinery	20.0 Lakhs	
36.	c) Total Cost	45.2 Lakhs (including EMP cost - 3.5 lakhs)	
37.	d) Financial Statement including funding source and details of insurance etc.	Funding will be taken care by M/s. T.M. Constructions	
38.	Management Plan	MANAGEMENT PLAN:	
		Air pollution	<ul style="list-style-type: none">➤ Water sprinkling will be done by water tanker fitted with water pump to reduce generation of dust during loading.➤ Dust masks will be provided to operators and other persons near loading.➤ Green belt will be developed around the mine lease boundary in order to reduce spread of air pollution and plantation will be done around mine office, haul road, etc to control dust pollution.
		Water pollution	<ul style="list-style-type: none">➤ No waste water generation is envisaged during the mining process. The domestic effluent generated from the mine office, will be disposed off in soak pits via septic tanks.➤ Water will be stored in the pit required for irrigation of plants, spraying water on roads and other miscellaneous purposes by diverting direction of the garland drain towards pit when required
		Noise	<ul style="list-style-type: none">➤ Green belt will be developed around the mine lease boundary in order to reduce noise pollution in the surroundings.➤ Controlled Blasting will be carried

			out to minimize noise generation. Blasting will be done in day time. ➤ Drilling will be done with sharp drill bits, which reduces generation of noise during drilling.
		Solid Waste Management	➤ Solid waste will be disposed or utilized for filling excavated areas, road construction and artificial soil for greenhouse pot trails for grass & tree growth at mining area.
		Eco restoration	➤ Green belt will be developed around the mine lease boundary, around mine office, haul road, etc to restore the ecology and aesthetics of the mine site.
39.	VI. Whether Environment Management Plan or Eco restoration Plan satisfactory?	Yes. Environmental Management Plan is provided with EC Application.	
40.	VII. Does it suggest mitigation measures for each activity	Yes	
41.	VIII. If Pre-Feasibility Report (PFR) satisfactory	Yes.	
42.	IX. Does it need public hearing	Not Required	
43.	X. Details of litigation and Court verdict if any	No court case is pending against this project.	
44.	XI. Details of public complaint, if any	No Complaints against this project	
45.	XII. Details of statutory sanction required	Not Required	
46.	XIII. If CRZ recommendation applicable?	Not Required	
PART B			
Environment Impact Assessment and Mitigation Measures			
Impact on water			
47.	a) Details of water requirement per day in KLD	17.0 KLD	
48.	b) Water source/sources.	Open well at the Project site	
49.	c) Expected water use per day in KLD.	17.0 KLD	
50.	d) Details of water	Open well water will be used. Harvested rain water will	

	requirements met from water harvesting.	be used for greenbelt development & dust suppression in future														
51.	e) What are the impact of the proposal on the ground water?	There is no impact on ground water due to this project. The mining activity is terminated 3m above the water table.														
52.	f) How much of the water requirement can be met from the recycling of treated waste water? (Facilities for liquid waste treatment)	Sewage will be disposed to Septic tank followed by the soak pit.														
53.	g) What is the incremental pollution load from waste water generated from the proposed activities?	No incremental pollution load due to wastewater generation. Wastewater will be disposed in septic tank followed by soak pit.														
54.	h) How is the storm water from within the site managed?	The mine pit will be used as a storm water reservoir. Excess water will be diverted to drainage to reach the external drainage.														
Impact on Biodiversity and Eco restoration Programmes																
55.	a) Will the project involve extensive clearing or modification of vegetation (Provide details)	The proposed mining activity involves clearing of minor shrubs and weeds and does not cause loss of native species or genetic diversity														
56.	b) What are the measures proposed to minimize the likely impact on vegetation (details of proposal for tree plantation/ landscaping)	<p>Due to this project, small amount of vegetation loss will occur. The following trees are proposed to be planted in the greenbelt area.</p> <table><tr><th>Botanical Name</th><th>Vernacular Name</th></tr><tr><td><i>Grevillea robusta</i></td><td>Silver oak</td></tr><tr><td><i>Cocos nucifera</i></td><td>Thengu (Coconut)</td></tr><tr><td><i>Alstonia scholaris</i></td><td>Pala</td></tr><tr><td><i>Garcinia cambogia</i></td><td>Kodampuli (Malabar Camboge)</td></tr><tr><td><i>Carica Papaya</i></td><td>Kappanga / Omakaya</td></tr><tr><td><i>Mangifera indica</i></td><td>Mavu (Mango)</td></tr></table>	Botanical Name	Vernacular Name	<i>Grevillea robusta</i>	Silver oak	<i>Cocos nucifera</i>	Thengu (Coconut)	<i>Alstonia scholaris</i>	Pala	<i>Garcinia cambogia</i>	Kodampuli (Malabar Camboge)	<i>Carica Papaya</i>	Kappanga / Omakaya	<i>Mangifera indica</i>	Mavu (Mango)
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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)	The proposed activity is neither displacing any terrestrial or aquatic fauna. There is no endangered species found in the study area.														

Impact on Air Environment		
58.	a) What are the mitigation measures on generation of dust, smoke and air quality	Control measures like suppression of dust by water sprinkling and developing green belt along the periphery of the pit will be carried out for controlling the dust.
59.	b) Details of internal traffic management of the site.	Haul road will be developed at the point of loading. Width of the access road to site is 8m. The mine roads are also semi-permanent nature and hence will not be any impact after the closure of mine
60.	c) Details of noise from traffic, machines and vibrator and mitigation measures	Quarrying of Rough Stone will be carried out by drilling and blasting by using low power explosives, and hence, noise will be very minimum.
61.	d) Impact of DG sets and other equipments on noise and vibration and ambient air quality around the project site and mitigation measures	Quarrying of Rough Stone will be carried out by drilling and blasting by using low power explosives, and hence, noise will be very minimum. However, periodical noise level monitoring will be carried out to check the noise level in and around the quarry site.
62.	e) Air quality monitoring in detail	Periodic air quality survey will be carried out to monitor the quality and for timely corrective actions. The environmental monitoring plan is provided in the EMP.
Energy Conservation		
63.	a) Details of power requirement and source of supply.	50 KW & DG Set.
64.	b) Details of renewable energy (non – conventional) used.	-
Risk Management		
65.	a) Are there sufficient measures proposed for risk hazards in case of emergency such as accident at the site?	First aid facility will be provided at the site and emergency vehicle will be provided in case emergency.
66.	b) Are proposals for fencing around the quarry satisfactory? c) Storage of explosives/hazardous substance in detail d) Facility for solid waste management	Explosives will be stored as per the Indian Explosive Act 1958 & explosive rules 1983. Solid waste will be proposed to stack initially along the lease boundary and will be backfilled finally within the mine lease area
Socio Economic Impacts		
67.	a) Will the project cause adverse effects on local communities disturbance to sacred	The proposed project will not cause any disturbance to the local communities. There are no sacred sites or cultural values nearby.

	sites or other cultural values. What are the safe guards proposed?																
68.	b) Will the proposal result in any changes to the demographic structure of local population. If so, provide details.	There is no change in demographic structure due to this project. The local people will be employed for this quarry.															
69.	c) Are the CSR proposals satisfactory. Give details	<table border="1"> <thead> <tr> <th colspan="3">Common CSR ACTIVITIES already carried out</th></tr> <tr> <th>Sl.no</th><th>Particulars</th><th>Amount in Rs. In lakhs</th></tr> </thead> <tbody> <tr> <td>1</td><td>Road Maintenance of Kulangarakavu - Kumaramangalam Road</td><td>3.0</td></tr> <tr> <td>2</td><td>Provision of Books, Tables, Computers for Ezhumattoor Government Higher Secondary School buildings</td><td>2.0</td></tr> <tr> <td></td><td>Total</td><td>5.0</td></tr> </tbody> </table> <p>Proposed CSR Activity details are provided in the Enclosed Annexure – 1.</p>	Common CSR ACTIVITIES already carried out			Sl.no	Particulars	Amount in Rs. In lakhs	1	Road Maintenance of Kulangarakavu - Kumaramangalam Road	3.0	2	Provision of Books, Tables, Computers for Ezhumattoor Government Higher Secondary School buildings	2.0		Total	5.0
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70.	d) What are the projects benefits in terms of employment potential?	A total of 18 people will be employed in this mine. It will create employment (though marginally) for local population of the area.															
PART C																	
71.	Details of NABET approved EIA Consultant engaged-Their name, address and accreditation details	Certificate No.:NABET/EIA/1316/RA001 ABC Techno Labs India Pvt. Ltd, No.2, 2nd street, Thangam colony, Anna nagar West, Chennai- 600 040 Ph: +91 -422 -2453737															
Summary and Conclusion																	
72.	a) Overall justification for implementation of the project.	Adequate resources are available in the project site and adjacent facilities & infrastructure are adequate. Currently market value of the building stone is good in the surrounding area.															
73.	b) Explanation of how adverse impacts have been mitigated.	<p>Land Environment Source of impact: Change of land use Mitigation measures: Construction of check dams, greenbelt development</p> <p>Water Environment Source of impact: Domestic wastewater Mitigation measures: Domestic sewage will be routed to septic tank followed by soak pit.</p> <p>Air Environment:</p>															

		<p>Source of impact: Excavation, loading , transportation</p> <p>Mitigation measures: water sprinkling & greenbelt development.</p> <p>Noise Environment:</p> <p>Source of impact: drilling, blasting, loading and unloading of mineral</p> <p>Mitigation measures: Proper maintenance of machinery and equipments & design, Use of personnel protective devices i.e. earmuffs and earplugs by workers</p>
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2. The proposal was considered in 55th SEAC held on 10th, 11th and 20th of May, 2016. The Committee deferred the item for site inspection and decided to examine the complaint received from Sri. Biju Kumar, T.R during the time of field visit.

Field visit to the Quarry project site of M/s T.M. Constructions., Ezhumattoor and Kottangal Village, Mallappally taluk, Pathanamthitta district, Kerala was carried out on 08.07.2016 by the sub-committee of SEAC, Kerala, comprising Dr. Keshav Mohan and Sri. John Mathai. The representatives of the proponent were present at the site at the time of site visit. The report is as follows:

The project is located at about 2 km SSE of Vaipur. This quarry lease area of 4.5491 ha falling in own land occupy the northern slopes of a hill ridge exposing hard rock. On the southern flanks are two other quarries for which EC has been recommended. Boundary pillars of the plot are erected and numbered displaying GPS values but not the quarry area. The rock type is variants of charnockite. The lease area is currently not being worked but shows old working pits. The thickness of OB and top soil varies with relatively deeper cover on the foot hill zone near to the road. The storm water from the entire area is likely to flow as sheet flow into the lower valley part to meet the stream. Rubber plantation is the dominant landuse. Floral and faunal biodiversity is not observed as the area is cleared of natural vegetation. Dwelling units are seen within 100 m on the north-eastern side close to the road.

Based on an overall evaluation of the site, following conditions may be fulfilled before it is recommended for EC:

- i. *Though the area under ownership is demarcated, the Mine lease area with boundary pillars is not demarcated precisely. It should be carried out on a*

priority basis and intimated. The areas with top soil and OB in excess of 2 m seen close to the road are to be avoided while demarcating the quarry area. The quarry area can be on the upslope of the old workings.

- ii. Top soil and Over burden should be stored in a designated place on the lower slope away from the working area and provided with protective support walls.*
- iii. The water draining into the valley will need clarification once the quarry is in operation. It must be managed by providing a RWH/desiltation structure. A catch water drain is needed on the lower slopes leading to the desiltation structure. Near to the entry the approach road crosses a stream without any culvert.*
- iv. Settlements are seen adjacent the road. A clear aerial distance in excess of 100 m should be provided. As such there are complaints about the method of working and the time of operations in the past.*
- v. The approach road is narrow and need to be widened and surfaced for the movement of heavy vehicles.*
- vi. The CSR activity needs revision addressing the needs of the locality.*

3. The proposal was considered in the 60th SEAC meeting held on 28-29th July, 2016. The Committee appraised the proposal based on mining plan, prefeasibility report, field inspection report and all other documents submitted. The committee deferred the item and the proponent was asked to submit the above documents/clarifications asked for, as above.

4. The proposal was considered in the 64th Meeting of SEAC held on 16th and 17th November 2016. The committee verified the additional documents submitted by the proponent and found satisfactory. Based on the Mining plan, Form.1, all other documents submitted with the proposal and the field visit report, the committee decided to recommend the item subject to the following specific conditions in addition to the general conditions.

- 1. The areas with top soil and OB in excess of 2 m seen close to the road are to be avoided while quarrying.*
- 2. The approach road is narrow and need to be widened and surfaced for the movement of heavy vehicles.*
- 3. 100M clear distance from quarrying area and residential buildings shall be strictly observed.*
- 4. The CSR is modified for an amount of 7 lakhs per annum for recurring activities & 6 lakhs for non-recurring activities.*

5. SEIAA in its 62nd meeting held on 23/12/2016 noticed the observation of 60th meeting of SEAC held on 28th & 29th July 2016 that there are complaints about the method of working at the time of operation in the past. Also in the inspection report it is noted that dwelling units are seen within 100 m on the north eastern side close to the road. Therefore the Authority authorised SEIAA Chairman and Member to inspect and verify the above aspects and method of working of the quarry.

As decided in the 62nd SEIAA meeting held on 23.12.2016, Chairman and the member of SEIAA visited the quarry project site of M/s TM Construction of K.A Thomas at Ezhumattoor and Kottangal Village, Mallappally Taluk, Pathanamthitta District on 03/03/2017. The report is as follows:

Mining started in 2005 on permit. Permit period expired on 15.01.2016 and hence there is no mining work at present.

The project was submitted on 25.08.2015 for E.C. The project is located at about 2 km SSE of Vaipur, quarry lease area is 4.5491 ha of his own land. Quarrying mainly of building stone for 48569 m³ annually. It is now not working since 15.01.2016. Topography of the land is hilly and there is no overburden. The mine lease area with boundary pillars are not demarcated. The lease area with a latitude of N 09°25'53.36" and Longitude E 76°42'46.37". The lease area shows old working pits, the land occupy the northern slopes a hill ridge exposing hard rock. There is no possibilities of land slides and soil erosion. Dwelling units are seen within 100 ms on the north eastern side close to the road. There is no fencing around the quarry. Mining is not done by bench formation. Floral and faunal biodiversity is not observed as the area is cleared of natural vegetation. The approach road is narrow and need to be widened and surfaced for the movement of heavy vehicles. There is no facility of Rain Water Harvesting. The total cost of the project and CSR are not clearly mentioned.

There is one complaint against the quarry by Sri.Biju Kumar, Thekkumplakkal, Ezhumattoor P.O and others. The complainant had requested for a hearing before EC is recommended.

On the overall evaluation the application may be recommended for EC with the following specific conditions.

- 1. The dwelling units within 100 m should be demolished before EC is issued.*
- 2. Quarrying should be scientifically done with bench formation.*

3. *Fencing should be done around the lease area with barbed wires.*
 4. *The approach road should be widened and surfaced for the movement of heavy vehicles.*
 5. *Rain Water Harvesting structure should be installed.*
 6. *The areas with top soil and OB in excess of 2 m seen close to the road are to be avoided while quarrying.*
 7. *Biodiversity of the area should be maintained with native plants and of any endemic species removed must be replanted.*
 8. *More realistic CSR amount should be submitted.*
6. The Authority in its 67th meeting held on 28/4/2017 decided to give the complainant Sri.Biju Kumar an opportunity for hearing as per his request before the issue of Environmental Clearance.

During the hearing on 1/6/2017 Shri.Biju Kumar informed that the low lying fields would be affected by the quarrying operations and face water scarcity. The traffic in the near by roads will be affected. There had been instances when huge rocks fell on their houses. He requested not to grant Environmental Clearance.

7. The proposal was placed in the 70th meeting of SEIAA held on 16.06.2016. Authority examined the arguments of the ^{Complainant}proponent and noticed that he lives outside 100m and his arguments are not acceptable. Hence the Authority accepted the recommendation of SEAC & SEIAA decided to issue EC with the following specific condition in addition to general condition. An affidavit satisfying all the specific conditions should be submitted before the issuance of EC.

1. The areas with top soil and OB in excess of 2 m seen close to the road are to be avoided while quarrying.
2. The approach road is narrow and need to be widened and surfaced for the movement of heavy vehicles.
3. 100 m clear distance from quarrying area and residential buildings shall be strictly observed.
4. The CSR is modified for an amount of 7 lakhs per annum for recurring activities & 6 lakhs for non-recurring activities.

The proponent has submitted an affidavit vide reference 8th cited satisfying all the above conditions.

8. Environmental clearance as per the EIA notification 2006 is hereby accorded for the proposed building stone quarry project of Sri.K.A. Thomas, Managing Partner, MMC No. XX/466, (opp. Aramana Complex) Muvattupuzha, Ernakulam Kerala-686661 in Sy. No. 148/6, 145/6, 145/5, 145/9, 145/3, 148/3, 145/7, 148/4, 145/6-1, 148/10, 145/8, 145/3-1, 145/2, 146/8, 150/1-1, 148/9 of Ezhumattoor Village & in Sy.No.158/3, 159/14-1, 159/15 of Kottangal Village, Mallappally Taluk, Pathanamthitta District, Kerala for an area of 4.54.91 hectares, subject to the specific conditions as in para 7 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.

9. 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 6 (Mining), Chapter 7 (Blasting), Chapter 8 (Mine Drainage), 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.

10. 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.

11. 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, Pathanamthitta to take legal action under the Environment (Protection) Act 1986.

- iii) The given address for correspondence with the authorised signatory of the project is Sri.K.A. Thomas, Managing Partner, MMC No. XX/466, (opp. Aramana Complex) Muvattupuzha, Ernakulam Kerala-686661.

Sd/-

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

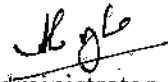
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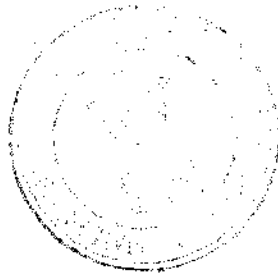
Sri.K.A. Thomas,
Managing Partner,
MMC No. XX/466, (opp. Aramana Complex)
Muvattupuzha, Ernakulam
Kerala-686661

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, Pathanamthitta
5. District Geologist, Pathanamthitta
6. Tahsildhar, Mallappally Thaluk, Pathanamthitta
7. Chairman, SEIAA.
8. Website.
9. S/f
10. O/c

Forwarded/By Order


Administrator, SEIAA



STATE ENVIRONMENT IMPACT ASSESSMENT AUTHORITY KERALA

GENERAL CONDITIONS (for mining projects)

1. Rain Water Harvesting facility should be installed as per the prevailing provisions of KMBR / KPBR, unless otherwise specified.
2. Environment Monitoring Cell as agreed under the affidavit filed by the proponent should be formed and made functional.
3. Suitable avenue trees should be planted along either side of the tarred road and open parking areas, if any, including of approach road and internal roads.
4. Maximum possible solar energy generation and utilization shall be ensured as an essential part of the project.
5. Sprinklers shall be installed and used in the project site to contain dust emissions.
6. Eco-restoration including the mine closure plan shall be done at the own cost of the project proponent.
7. At least 10 percent out of the total excavated pit area should be retained as water storage areas and the remaining area should be reclaimed with stacked dumping and overburden and planted with indigenous plant species that are eco-friendly, if no other specific condition on reclamation of pit is stipulated in the E.C.
8. Corporate Social Responsibility (CSR) agreed upon by the proponent should be implemented
9. The lease area shall be fenced off with barbed wires to a minimum height of 4ft around, before starting of mining. All the boundary indicators (boards, stores, markings, etc) shall be protected at all times and shall be conspicuous.
10. Warning alarms indicating the time of blasting (to be done at specific timings) has to be arranged as per stipulations of Explosive Department.
11. Control measures on noise and vibration prescribed by KSPCB should be implemented.
12. Quarrying activities should be limited to day time as per KSPCB guidelines/specific conditions.
13. Blasting should be done in a controlled manner as specified by the regulations of Explosives Department or any other concerned agency.
14. A licensed person should supervise/ control the blasting operations.
15. Access roads to the quarry shall be tarred to contain dust emissions that may arise during transportation of materials.
16. Overburden materials should be managed within the site and used for reclamation of mine pit as per mine closure plan / specific conditions.
17. Height of benches should not exceed 5 m, and width should not be less than 5 m, if there is no mention is the mining plan/specific condition.
18. Mats to reduce fly rock blast to a maximum of 10 PPV should be provided.
19. Maximum depth of mining from general ground level at site shall not exceed 10m
20. No mining operations should be carried out at places having a slope greater than 45°.
21. Acoustic enclosures should have been provided to reduce sound amplifications in addition to the provisions of green belt and hollow brick envelop for crushers so that the noise level is kept within prescribed standards given by CPCB/KSPCB.
22. The workers on the site should be provided with the required protective equipment such as ear muffs, helmet, etc.
23. Garland drains with clarifiers to be provided in the lower slopes around the core area to channelize storm water.
24. The transportation of minerals should be done in covered trucks to contain dust emissions.
25. The proponent should plant trees at least 5 times of the loss that has been occurred while clearing the land for the project.
26. Disposal of spent oil from diesel engines should be as specified under relevant Rules/ Regulations.
27. Explosives should be stored in magazines in isolated place specified and approved by the Explosives Department.
28. A minimum buffer distance of 100m from the boundary of the quarry to the nearest dwelling unit or other structures, not being any facility for mining shall be provided.
29. 100 m buffer distance should be maintained from forest boundaries.

30. Consent from Kerala State Pollution Control Board under Water and Air Act(s) should be obtained before initiating mining activity.
31. All other statutory clearances should be obtained, as applicable, by project proponents from the respective competent authorities including that for blasting and storage of explosives.
32. In the case of any change(s) in the scope of the project, extent quantity, process of mining technology involved or in any way affecting the environmental parameters/impacts as assessed, based on which only the E.C is issued, the project would require a fresh appraisal by this Authority, for which the proponent 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

