



Validity expires on 04.01.2023

Proceedings of the State Environment Impact Assessment Authority Kerala

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

Sub: SEIAA- Environmental clearance for the proposed quarry project in Sy. Nos. 147/8, 147/9 , 147/9-1, 147/10, 147/11, 147/11-1, 148/6, 9, 8, 4, 5, 7, 2-2, 3(Part), 149/1, 2, 3, 4 & 152/1-1 at Karavaram Village, Varkala Taluk, Thiruvananthapuram District, Kerala by Sri. R. J. Karunanidhi, Managing Partner, M/s K. V. Blue Metals - Granted – Orders issued.

STATE ENVIRONMENTAL IMPACT ASSESSMENT AUTHORITY, KERALA

No. 749/SEIAA/EC1/226/2015

Dated, Thiruvananthapuram 05.01.2018

- Ref: 1. Application received on 20.01.2015 from Sri. R. J. Karunanidhi, Managing Partner, K.V. Blue Metals, TC 36 / 999, T. R. Sukumaran Nair road, Perumthanni, Thiruvananthapuram-695 008.
2. Minutes of the 63rd meeting of SEAC, held on 04th October, 2016.
 3. Minutes of the 66th meeting of SEAC held on 19th December 2016.
 4. Minutes of the 72nd meeting of SEAC held on 8th and 9th May 2017.
 5. Minutes of the 71st meeting of SEIAA held on 20th July 2017.
 6. Minutes of the 76th meeting of SEIAA held on 16th November 2017.
 7. Affidavit received on 17.08.2017 from Sri. R. J. Karunanidhi.

ENVIRONMENTAL CLEARANCE NO. 06/2018

Sri. R. J. Karunanidhi, Managing Partner, K.V. Blue Metals, TC 36 / 999, T. R. Sukumaran Nair road, Perumthanni, Thiruvananthapuram-695 008, vide his application received on 20.01.2015, has sought Environmental Clearance under EIA Notification, 2006 for the proposed quarry project in Sy. Nos. 147/8, 147/9 , 147/9-1, 147/10, 147/11, 147/11-1, 148/6, 9, 8, 4, 5, 7, 2-2, 3(Part), 149/1, 2, 3, 4 & 152/1-1 at Karavaram Village, Varkala Taluk, Thiruvananthapuram District, Kerala for an area of 4.92.11 hectares. The project comes under Category B, Activity 1(a), (i) as per the Schedule of EIA Notification 2006 (since it is below 50 hectares) and as per O.M. No. L-11011/47/2011-IA.II(M) dated 18th May 2012 of Ministry of Environment and Forests. It is further categorized as Category B2 as

per Notification No.S.O.141 (E) dt.15.01.2016 of Ministry of Environment and Forests, since the area of the project is below 25 hectares.

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

BASIC INFORMATION OF QUARRY

(To be filled in by the Project Proponent)

PART A

I. Project details		
1.	File No.	749/SEIAA/KL/226/2015
2.	Name /Title of the project	Stone quarry , Karavaram
3.	Name and address of project proponent.	Shri. R.J.KARUNANIDHI Managing Partner, TC 36 / 999 Sukumaran Nair road , Perumthanni , Thiruvananthapuram - 695008 Phone No :.09847060399, Email : kpggranite@yahoo.co.in
4.	Owner of the land	The Company owned lands.
5.	Survey No. District/Taluk/ and Village etc.	Sy. Nos: 147/8, 147/9, 147/9-1, 147/10, 147/11, 147/11-1, 148/6, 9, 8, 4, 5, 7, 2-2, 3(Part), 149/1, 2, 3, 4 & 152/1-1 Village : Karavaram Taluk : Varkala District : Thiruvananthapuram.
6.	Details of period of lease or permit with number including the beginning and expiry date of lease/permit period (Copy to be attached)	G.O. No:788/2010-11/1196 /M3/2011 Dated 22.2.2011. For a period of 12 years up to 02.03.2023. Copy Enclosed . <u>Details of Mining Plan Approval:-</u> (District Geologist Trivandrum – Letter No:805/Dot/ML/2015 Dated : 08-12-15)
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?	15.07.2014 Quarry is Working
8.	Date of submission of Application	Submission on 20.01.2015
9.	Brief description of the project.	The company M/s . K.V. Blue Metals , has obtained quarry lease G.O. No: 788/2010-11/1196 /M3/2011 Dated 22.2.2011 for a period of 12 years ending on 02.03.2023 for the operation of granite building stone quarry over 4.92.11 Hectares in company's patta lands

		in Karavaram village, Varkala Taluk and Thiruvananthapuram – District . Presently lease area is in quarry operation. The company has obtained approval for mining plan to produce 50,000 metric tonnes per annum of building stone. And the mining plan original submitted. As per the EIA Notification 2006, the company has applied for environmental clearances and submitted relevant documents.
10.	Details of Authorized Signatory and address for correspondence	Shri. R.J.KARUNANIDHI Managing Partner, K.V. Blue Metals, TC 36/999 Sukumaran Nair Road, Perumthanni, Thiruvananthapuram - 695008 Phone No : 09847060399 Email : kpggranite@yahoo.co.in
II. Land Details		
11.	1. Extent of area in hectares	4.92.11 hectares
12.	2. Is the property forest land/Govt. land/own land/patta land	Patta Land
13.	3. Quantity of top soil/over burden produced and managed	Topsoil Quantity = 26,593 Tonnes Overburden Quantity = 24,840 Tonnes (Temporary Dump will in Western Side of Own land Area in Survey No: 148/2-2, & 148/7.)
14.	4. Latitude and Longitude	08°45'14.2" N to 08°45'22.7" N, 76°49'40.0" E to 76°49'50.1" E.
15.	5. Topography of land and elevation	Topographically the area is an undulating hill with slope towards south. Part of the proposed land is under the operation of the quarry and there is no vegetation in that due to rocky terrain. The lease area is located in an hill where highest level is 120 m above MSL while the lowest level is 80 m above MSL. Rain water flow is through the natural minor water courses towards east joining with seasonal nallah.
16.	6. Slope analysis	The lease is located on the hill slope. The slope area consists of top soil 1.0 m thickness and weathered gneiss overburden to a thickness of 1.0 m. The area is under quarry operations. The hard massive charnockites rock is existing below the overburden. Based on the geological formations, granitic rock is extending to a deeper depth. Since it is of plutonic origin.
17.	7. Will there be any significant land disturbance resulting in soil erosion, subsidence & natural drainage.	Nil
18.	8. Access road to the site width and condition	Access Road is start from Panchayat road at a distance of 100m. The access road (private) is being maintained 7.0 width

19.	9. Will there be any adverse impact on the aesthetics of the proposal site	Nil	
III. Mining details			
20.	a) Minimum and Maximum height of excavation.	120.0 MSL maximum level , 80.0 MSL minimum level, Avg Depth 40 mtr.	
21.	b) Life of mine proposed.	21 Years	
22.	c) Underground mining if any proposed	Nil	
23.	d) Method of Mining	Open Cast – Semi Mechanized Quarry	
24.	e) Distance from the adjacent quarry	Adjacent Quarry is existing at the Lease boundary.	
25.	f) Cluster condition if any	Not applicable	
26.	g) Has “No cluster certificate” submitted?	Yes	
27.	h) Distance from nearby habitation	105.0m --house from Nearest Lease Boundary	
28.	i) Distance from nearby forest, if applicable	Not applicable	
29.	j) Distance from protected area, Wildlife Sanctuary, National Park etc.	43km(Agasthyakoodam Reserve Forest) 46km (Peppara Wild Life Sanctuary)	
30.	k) Distance from nearby streams/rivers/National Highway and Roads	Vamanapuram River – 5.5 Km NH-47(cochin – Kanyakumari) – 5.4 Km	
31.	l) Is ESA applicable? If so distance from ESA limit	Non-ESA Zone	
32.	m) Has approved mining plan, prepared by RQP submitted?	Yes	
33.	n) Capacity of production in TPA	50,000 Tonnes Per Annum	
34.	o) Details of mining process	The mining will be done open cast semi-mechanized method. The bench height and width will be maintained at 5 m and 6 m respectively. Excavated material is transported to the crusher located within 300 m on the southern side of mining pit.	
IV. Details of Project cost			
35.	a) Land cost	25,00,000/-	
36.	b) Plant and Machinery	50,00,000/-	
37.	c) Total Cost	75 Lakhs	
38.	V. Financial Statement including funding source and details of insurance etc.	Financial status of the company is sound. The company is doing quarry operations and Building stone trading for the past ten years.	
39.	Management Plan	Air Pollution	Quarry operation will produce dust and will pollute the air. Dust will be arrested at the dust arising places itself with frequent water sprinkling.
		Water Pollution	There will be no change in the existing drainage system due to

			the proposed quarrying activities. No change in the existing status is envisaged Necessary control measures like chlorination etc in the well will be made.
		Noise	Drilling machines and vehicle movements will produce noise To keep the noise level under control within the limits, proper maintenance of these machines will be done.
		Solid Waste Management	Total quantity of Top soil 26,593 Tonne & quantity of Overburden 24,840 Tonns will be handled during the life of the mine. Top soil will be used for plantation and the waste rock will be used for refilling, levelling of roads. It will be temporarily dumped in Southern side of the Lease Area
		Eco-restoration	To maintain Eco restoration, periodical afforestation and maintenance of the plantation will be made, rain harvesting and dust controlling will be done. Mining will be done by Eco-friendly method.
40.	VI. Whether Environment Management Plan or Eco restoration Plan satisfactory?	This being a small quarry operation, insignificant impact will arise under this project. Fugitive dust emissions from drilling movement of vehicles, emission will be controlled to insignificant levels by frequent water spraying on roads, black toppings of road where ever possible, good maintenance practices and forming of thick green belt. Monitoring and mitigate measures given in environment management plan will be strictly implemented. The Eco-restoration programme also given in the approved mining plan will be implemented. The project environment plan and eco – restoration plan will set precedence in the area for environmental preservation and socio economic improvement.	
41.	VII. Does it suggest	Yes. Entire quarry operation activity will be carried by	

	mitigation measures for each activity	taking suitable effective control measures to avoid any damage to the surrounding environments. During monsoon, the rain water will be diverted through the garland drainage channels, without entering into the quarry pit. Check dams are constructed in the drainage channel to control the storm water and to settle the turbidity and slushy materials in the rain water. EIA study have been carefully made and specific Environmental plan have been scheduled. All the mitigate measures in EMP for each environ will be respectively followed.
42.	If Pre-Feasibility Report (PFR) satisfactory	Yes. As per the guidelines given by the Dept. of SEIAA, the Pre-Feasibility have been made. Geological formation and topographic conditions have studied and given in the PFR. Geological reserves, mineable reserves quantity of top soil removal and the quantity waste rock handling have been estimated. Further to operate the quarry, with personal safety and environmental safety, all the measures and mitigate action have been planned and briefed in PFR. It is assured that this quarry project can be operated for 21 years based on the present rate of production.
43.	Does it need public hearing	Not required. The quarry lease has already been granted. The lease area is less than 25 hectares. For the operational quarry Environmental Clearance is applied.
44.	Details of litigation and Court verdict if any	Nil
45.	Details of public complaint, if any	Nil
46.	Details of statutory sanction required	Nil
47.	If CRZ recommendation applicable?	Nil
PART B		
Environment Impact Assessment and Mitigation Measures		
Impact on water		
48.	Details of water requirement per day in KLD	Daily requirement of water - 5.00 KLD Domestic - 1.00 KLD Dust control and plantation - 4.00 KLD Rain water collected in the quarry pit will be used. For domestic use water will be drawn from dug wells in the project site.
49.	Water source/sources.	Daily requirement of water - 5.00 KLD Domestic - 1.00 KLD Dust control and plantation - 4.00 KLD Rain water collected in the quarry pit will be used. For

		domestic use water will be drawn from dug wells in the project site.
50.	Expected water use per day in KLD.	5 KLD, 1.00 KLD DOMESTIC, 4.00 KLD Dust control Plantation. Dug well and rain water.
51.	Details of water requirements met from water harvesting.	Rain water harvesting ponds proposed during post mining extending over an area of 0.05.07 Hectare in the bottom level of mining Pit and 0.45.00 Hectare inside the Lease area. Existing rain water harvesting pond in applicant's own land in Sy no. 150/4.
52.	What are the impact of the proposal on the ground water?	NIL. Quarrying will not intersect ground water table and will not disturb the drainage system.
53.	How much of the water requirement can be met from the recycling of treated waste water? (Facilities for liquid waste treatment)	About 4.00 KLD – Rain water collected in the quarry pit will be used for dust suppression and green belt.
54.	What is the incremental pollution load from waste water generated from the proposed activities?	Nil. Only solid stone waste will be generated in the quarry operation. It will be used for refilling of the quarry pit, road leveling etc.,
55.	How is the storm water from within the site managed?	Garland, drainage channel around the quarry pit and dumps and check dam will be constructed. Storm water will be diverted to join with natural drainage system.
Impact on Biodiversity and Eco restoration Programmes		
56.	Will the project involve extensive clearing or modification of vegetation (Provide details)	Part of the area is under the quarry operations. The area is covered mostly with bushes and shrubs. In the company's adjacent lands coconut, mango trees, thekku Plantations are existing, which will not be disturbed.
57.	What are the measures proposed to minimize the likely impact on vegetation (details of proposal for tree plantation/ landscaping)	The lease area is in rocky terrain. Plantation will be raised in the safety zone area, dump slopes and in company's own lands. Biodiversity species will be planted in about 1250 Nos. will be raised in 1.30.96 Hectares.
58.	Is there any displacement of fauna – both terrestrial and aquatic. – If so what are the mitigation measures? Presence of any endangered species or red listed category (in detail)	Due to this project, there will not be displacement of Faunas.
Impact on Air Environment		
59.	What are the mitigation measures on generation of dust, smoke and air quality	<p>Mining activities like drilling, blasting, loading and transport vehicle will generate dust.</p> <p>Mitigate action</p> <ul style="list-style-type: none"> - Water spraying on haul roads, loading points will be done. - Provisions of dust filters / masks to worker working at the dust prone areas. - Thick green belt all along the periphery of the lease area will be made.

		<ul style="list-style-type: none"> - Periodical monitoring of Ambient Air Quality in and around the lease area will be done. Necessary measures will be taken immediately to arrest the pollution. - Drill machines will be equipped with dust collector <p>Wet drilling methods will be adopted.</p>
60.	Details of internal traffic management of the site.	Traffic – about 300 metric tonnes per day building metric tonnes rubbles will be handled. For transportation 6Nos of 20 metric tonnes tipper will be used. In a regular shift 4 Nos. of tipper will be used and making 2 to 3 trips.
61.	Details of noise from traffic, machines and vibrator and mitigation measures	During base line data collection, Ambient sound level study is conducted for 24 Hrs. In day time the values recorded is 50.7dBA to 55.4dBA and in the night it ranges 36.5dBA to 49.1dBA. in the Eco friendly quarry operations, Noise level will be controlled by proper maintenance of machinery, air compressors for drill shall have acoustically covered to control the noise.
62.	Impact of DG sets and other equipments on noise and vibration and ambient air quality around the project site and mitigation measures	<p>Working machineries, drilling, blasting and plying vehicles will produce noise.</p> <p>Proper maintenance of machinery will control the noise.</p> <p>Use of earmuffs and ear plugs for workers, working in noise area.</p> <p>Creation of wide green belt of dense foliage between mine areas and residential areas will reduce noise.</p>
63.	Air quality monitoring in detail	<p>Air quality monitored and analysed for base line data collection and results with the limits.</p> <p>During operation State Pollution Control Board monitoring services will be engaged.</p>
Energy Conservation		
64.	Details of power requirement and source of supply.	For quarry operation, no electricity is required as the drilling unit is operated by HSD. The power supply is required for office and work shop will be met through KSEB supply.
65.	Details of renewable energy (non – conventional) used.	No Electricity is required for quarry operation renewable energy is not studied.
Risk Management		
66.	Are there sufficient measures proposed for risk hazards in case of emergency such as accident at the site?	<p>The risk of accident is envisaged during operation transport vehicle. The accident may arise by improper transport operations or improper storage or handling of fuel oil. However proper control measures are planned and will be put in place, besides giving training to the workers involved in the above mentioned activities.</p> <p>First aid trainers will be engaged and the first aid</p>

		<p>room will be maintain with the medicines as per the practical norms.</p> <p>In order to handle disaster / emergency situations an organizational chart entrusting responsibility to various project Personnel will be prepared with their specific roles during emergency and will be made them ready to manage the situations.</p>									
67.	<p>Are proposals for fencing around the quarry satisfactory?</p> <p>Storage of explosives/hazardous substance in detail</p> <p>Facility for solid waste management</p>	<p>The periphery of quarry lease area, are completely made barbed wire fencing to prevent unauthorized entries of people and avoiding animals entering the quarry operational areas.</p> <p>The company has obtained explosive licences for magazines. Explosives will be procured, stored, transported, handled and used in accordance with Indian Explosives Rules 2008, Mines Act 1952 and regulations there under.</p> <p>Solid waste will be used for leveling, paving of roads and Own construction works</p> <p>Solid waste will be stored temporarily on the North west side over an extent of 0.25.00 hectare. Survey No: 148/2-2 & 148/7.</p>									
Socio Economic Impacts											
68.	<p>Will the project cause adverse effects on local communities disturbance to sacred sites or other cultural values. What are the safe guards proposed?</p>	<p>The project will not cause adverse effects of local communities.</p> <p>It is predicted on the socio economic front, the impact due to this project will have positively increase more employment opportunities for local inhabitants.</p> <p>The company will give the vocational training to the nearby village people.</p> <p>There are no resettlements and rehabilitation issue is involve in this project.</p> <p>The infrastructure of the company will be of use to the people of the area.</p> <p>The company's CSR programs will uplift the local societies for better standard of social living.</p>									
69.	<p>Will the proposal result in any changes to the demographic structure of local population. If so, provide details.</p>	<p>The company's CSR programs will uplift the local societies for better standard of social living.</p>									
70.	<p>Are the CSR proposals satisfactory. Give details</p>	<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>01</td><td>Donation to Schools</td><td>Rs.13,000</td></tr> </tbody> </table>	Common CSR Activities already carried out			Sl.No	Particulars	Amount in Rs.in lakhs	01	Donation to Schools	Rs.13,000
Common CSR Activities already carried out											
Sl.No	Particulars	Amount in Rs.in lakhs									
01	Donation to Schools	Rs.13,000									

		02	Donation to Sports Club	Rs.52,500
		03	Medical aid for heart operation	Rs.25,000
		04	Conducted Marriage for poor peoples at Nellikunnu & other donations to temples	Rs.2,45,030
		05	Donation to Panchayath for drainage development	Rs.10,000
			Total	Rs.3,45,530/-
71.	What are the projects benefits in terms of employment potential?	<ul style="list-style-type: none"> • This project will give direct employment to 16 persons and indirectly about 100 persons. • The living condition and economic status of nearby village people and their education, social status will be considerably improved through Corporate Social Responsibility programs. Recurring Fund Rs.3.00 lakhs per year and capital fund of Rs.2.00 lakhs will be distributed, with out fail. • The quarried stone will be supplied to local market for building constructions roads and bridges etc., thus contributing to infrastructure development of the region. • Our company is doing business and quarry operations in this area for the past 10 years • The company has brought improvement in physical and social infrastructure in this area. There will be good social upliftment in this area along with visible biological improvement due to green belt creation etc <p>The company will be doing Eco friendly method of quarrying. It is hereby rest assured that due to quarry operation there will not be any environmental disturbance to the surrounding area.</p>		
PART C				
72.	Details of NABET approved EIA Consultant engaged-Their name, address and accreditation details	<p>The company has engaged Sr.Geologist well versed in MOEF rules and notifications.The company has made a careful EIA study and EMP program is scheduled relatively. The company is directly submitting the application and EMP proposals.The Mine layout drawings are prepared by Mines Surveyor approved by Directoroate of Mines Safety.The Geologist RQP Certificate is enclosed.</p> <p>Approved Mining Plan for the project is enclosed.</p>		
Summary and Conclusion				
73.	Overall justification for implementation of the project.	<p>a)Our company is doing business and quarry operations in this area for the past 10 years</p> <p>b)The company has brought improvement in physical and social infrastructure in this area.</p>		

		<p>There will be good social upliftment in this area along with visible biological improvement due to green belt creation etc</p> <p>c)The company will be doing Eco friendly method of quarrying .</p> <p>It is hereby rest assured that due to quarry operation there will not be any environmental disturbance to the surrounding area.</p>
74.	Explanation of how adverse impact have been mitigated.	
DESCRIPTION	IMPACT DUE TO PROPOSED QUARRY OPERATION	MITIGATIVE MEASURES
Climate	The activities envisaged will have negligible impact on the climate. However measures will be taken for control of dust etc.,	Water sprinkling will be done by mobile or standby sprinkler to arrest the dust in the dust arising places viz drilling, loading and haul roads.
Topography	The quarry operations will be done on the top level and on the slope of an hillock .	It is proposed to use 3.28.15 Hectares of land out of 4.92.11 will be used for quarry pit. At the conceptual stage, the ground profile will be changed to open quarry pit with benches. The benches will be rehabilitated with top soil, plantation will be raised. Bottom benches will be used for rain harvesting. Thick green belt and rain harvesting pond will give new aesthetic beauty to the area.
Land use	The total lease is 4.92.11 hectares	3.28.15 hectares will be used for quarry pit operation, 1.30.96 will hectares for Green belt and 0.33.00 hect will be used for Dump and building, road.
Solid waste	Total quantity of Top soil 26,593 tonne & quantity of Overburden 24,840 Metric tonnes will be handled during the life of the mine.	All the waste rock will be used for refilling, leveling of roads. It will be dumped in western side of the Lease Area
Drainage pattern	There will be no change in the existing drainage system due to the quarrying activities	Garland drainage channels, around the quarry pit and dump yards will be made. The run-off rain water will be going through the garland channel and join with the natural drainage system. Check dams will be constructed to control the flood water and to settle mud in the runoff water. Also artificial rain harvesting pond will be made in 2 or 3 places.
Air quality	Quarry operation will produce dust and will pollute the air	Dust will be arrested at the dust arising places itself with frequent water sprinkling. Periodical Air borne survey will be conducted and mitigate measures will be taken immediately.
Water quality	No change in the existing status is envisaged	There will be no change in the quality of water by the quarry operation. Necessary control measures like chlorination etc in the will be made in the water sources.
Water	5.0 KLD water is required	The requirement is low and will be collected

requirement	, for domestic 1.0KLD and for dust suppression and green belt 4.0 KLD	from the abandoned pits Hence negligible impact envisaged on ground water level/ potential. The quarry operation will not touch the water table.
Noise level	Drilling machines and vehicle movements will produce noise	To keep the noise level under control within the limits, proper maintenance of these machines will be done.
	Blasting sound	Minimum quantity of explosives will be charged. Blasting will be done between 1.00 to 2.00 in the noon when the atmospheric temperature will be high and noise will not be traversed for long distance. Green belt will act as sound barrier and also as dust absorber.
Flora and fauna	No threatened, endangered species of flora is reported in this area. IUCN status of the existing species is given in the Bio Diversity reports.	The company will raise thick green belt around the periphery of the quarry lease in the 7.5 m safety zone and also in the company owned lands. Total of about 1250 plants - species with equal percentage of the existing plant will be raised in 1.30.96 hectares of land and will be maintaining eco restoration system.
Socio-economics	There are no habitations in the lease applied area and RR programme will not arise.	The villagers nearer to the project site are agricultural workers. The Project operation will provide direct employment to 16 persons and indirectly to 100 persons. The project infrastructure developed like roads, lighting, communication control system will be used by the adjacent villages. The company will provide vocational training for the youth of the local peoples to get skilled jobs. Also benefit to the State and Central Governments by way of royalty, taxes, from the projects directly and also indirectly. Project Proponent has already spent Rs 3.5 Lakhs per year in the past years towards CSR activity. The company will spend recurring CSR Rs.2.00 lakhs per year and capital fund Rs 2.00 lakhs for schools and women empowerment.

2. The proposal was placed in the 63rd meeting of SEAC, Kerala, held on 04th October, 2016. The committee appraised the proposal based on the mining plan (KMMCR-2015), pre-feasibility report and all other documents submitted along with the Form I application. The proponent admitted that the quarry is in operational phase based on lease. The Committee decided to defer the item for field visit and for the production of more realistic CSR.

Accordingly, the Subcommittee of SEAC conducted the field visit and field visit report is given below.

Field visit to the Quarry project site of M/S K V Blue metals in Karavaram Village Thiruvananthapuram district, was carried out on 30.11.2016 by the sub-committee of SEAC, Kerala, comprising Dr. Harikrishnan and Sri. John Mathai. The Proponent Sri. R. J. Karunanidhi along with his team was present at the site at the time of site visit.

The project is located at about 5 km ESE of Kallambalam with approach from Kallambalam- Vellalloor- Kilimanur road. The area in general is rocky with patches of rubber. Several other quarries/abandoned quarries are seen in this region. This quarry area falling in own land occupy the crest and upper slopes of a hillock reaching to an elevation of 110 m and exposing hard rock. Boundary pillars of the plot are erected temporarily and numbered as given in the surface plan. The rock type is mostly massive charnockite. In the worked out faces formation of benches, storm water management with water channelized into a central pit on the eastern part that functions as RWH structure, dust suppression mechanism etc are seen. Steep faces of older workings are also noted on the southern and south western side. The quarry has a crusher unit. Floral and faunal biodiversity is not observed as the area is mostly rocky and disturbed. Adjacent area to the north belonging to the proponent was used for winning dimension stones but now discontinued. Though buildings of the company are in the vicinity, dwelling units are not seen within 100 m. Based on an overall evaluation of the site, issuance of EC can be recommended subject to the production of following:

- Details of the quarries within a distance of 500 m from the periphery of this quarry from the District Geologist in a tabular form ie Name of quarry, sy no, area, lease details and status whether currently working or abandoned. This is to verify whether it forms part of cluster.
- Enlarged Cadastral Map/ FM sketch showing entire area with survey numbers under ownership of the proponent and the location of the lease area within it. The location of the structures like crusher unit, office canteen etc can also be indicated
- Clarification regarding the ownership of narrow strip of land (sy no 147/2-3) for inclusion in the lease area.
- All the boundary pillars are to be fixed permanently on the ground and their respective coordinates to be marked on them
- Fencing to be completed around the lease area.
- Commitment of CSR to be verified.

3. The proposal was placed in the 66th meeting of SEAC held on 19th December 2016. 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 deferred the item for the submission of the following clarifications sought in the field visit report.

1. Details of the quarries within a distance of 500 m from the periphery of this quarry from the District Geologist in a tabular form ie Name of quarry, sy no, area, lease details and status whether currently working or abandoned. This is to verify whether it forms part of cluster.
2. Enlarged Cadastral Map/ FM sketch showing entire area with survey numbers under ownership of the proponent and the location of the lease area within it. The location of the structures like crusher unit, office canteen etc can also be indicated
3. Clarification regarding the ownership of narrow strip of land (sy no 147/2-3) for inclusion in the lease area.

4. *All the boundary pillars are to be fixed permanently on the ground and their respective coordinates to be marked on them*
5. *Fencing to be completed around the lease area.*
6. *Commitment of CSR.*

Subsequently the proponent submitted the above mentioned documents sought by the 66th SEAC.

4. The proposal was considered in the 72nd meeting of SEAC held on 8th and 9th May 2017. 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 for issuance of EC subject to general conditions in addition to the following specific condition.

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

SEIAA may insist for a commitment from the proponent to set apart Rs.2 lakh (non-recurring) and Rs.2 lakh per annum (recurring) for CSR activities for the welfare of the local community in consultation with the local Panchayat.

5. The proposal was placed in the 71st meeting of SEIAA held on 20th July 2017. Authority accepted the recommendation of SEAC and decided to issue EC subject to obtaining legal opinion as decided in the 66th SEIAA meeting whether quarrying on lease areas without Environmental Clearance also come under the scope of violation.

EC is recommended subject to the general condition in addition to the following specific conditions.

- i. *The building of the company located in the vicinity of the quarry, as reported by the Inspection team should be demolished.*
- ii. *All the boundary pillars are to be fixed permanently on the ground and their respective coordinates to be marked on them*
- iii. *Fencing to be completed around the lease area.*
- iv. *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 should set apart an amount of Rs.2 lakh (non-recurring) and Rs.2 lakh per annum (recurring) for CSR activities for the welfare of the local community in consultation with the local Panchayat. EC will be issued only after completing all the pre-mining conditions in the project site as noted above and a notarised affidavit should be submitted agreeing all the general and specific conditions.

6. In the light of the legal opinion, the 76th meeting of SEIAA held on 16th November 2017 decided to issue Environmental Clearance for the proposal. The proponent has submitted Affidavit vide reference 7th cited.
7. Environmental Clearance as per the EIA Notification 2006 is hereby accorded for the proposed quarry project of Sri. R. J. Karunanidhi, Managing Partner, K.V. Blue Metals, TC 36 / 999, T. R. Sukumaran Nair road, Thiruvananthapuram-695 008, in Sy. Nos. 147/8, 147/9, 147/9-1, 147/10, 147/11, 147/11-1, 148/6, 9, 8, 4, 5, 7, 2-2, 3(Part), 149/1, 2, 3, 4 & 152/1-1 at Karavaram Village, Varkala Taluk, Thiruvananthapuram District, Kerala for an area of 4.9211 Ha, subject to the specific conditions as 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 (Mines Drainage), Chapter 9 (EMP) Chapter 10 (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, Thiruvananthapuram
- iii. The given address for correspondence with the authorised signatory of the project is Sri. R. J. Karunanidhi, Managing Partner, K.V. Blue Metals, TC 36 / 999, T. R. Sukumaran Nair road, Perumthanni, Thiruvananthapuram-695 008.

Sd/-
P.H. Kurian. I.A.S.
Member Secretary (SEIAA)

To,

Sri. R. J. Karunanidhi,
Managing Partner, K.V. Blue Metals,
TC 36 / 999, T. R. Sukumaran Nair road,
Perumthanni, Thiruvananthapuram-695 008.

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. District Collector, Thiruvananthapuram
4. Director, Mining & Geology, Thiruvananthapuram -4.
5. The Member Secretary, Kerala State Pollution Control Board
6. District Geologist, Thiruvananthapuram
7. Tahsildhar, Varkala Taluk, Thiruvananthapuram
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

