सत्यमेव जयते

Validity expires on 11.07.2022

Proceedings of the State Environment Impact Assessment Authority Kerala

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

Sub: SEIAA- Environmental clearance for the Proposed quarry project in Sy. Nos. 10/1,18 of Kolavallur Village, Thalassery Taluk, Kannur District, Kerala by Mr.Keeran Kumaran, - EC granted – Orders issued.

STATE ENVIRONMENTAL IMPACT ASSESSMENT AUTHORITY, KERALA

No.935/SEIAA/ EC4/ 3948/2015) ***Dated,Thiruvananthapuram, 12.07.2017***

Ref: 1. Application dated 26-09-2015 from Sri.Mr.Keeran Kumaran, Reenalayam, East Valliayi, Muthiyanga P.O., Pathayakunnu, Kannur, Kerala -670691
2. Minutes of the 57th meeting of SEAC held on 16th & 17th June, 2016.
3. Minutes of the 61st Meeting of SEAC held on 11th August, 2016.
4. Minutes of the 69th Meeting of SEAC held on 09th & 10th March, 2017.
5. Minutes of the 68th Meeting of SEIAA held on 12th May,2017.
6. Affidavit dated.28.06.2017 from Sri.Mr.Keeran Kumaran

ENVIRONMENTAL CLEARANCE NO.45/2017

Sri.Mr.Keeran Kumaran, Reenalayam, East Valliayi, Muthiyanga P.O., Pathayakunnu, Kannur, Kerala State -670691, vide his application received on 28-09-2015 has sought Environmental Clearance under EIA Notification, 2006 for the quarry project in Sy. Nos. 10/1,18 at Kolavallor Village, Thalassery Taluk, Kannur District, Kerala by Sri.Keeran Kumaran for an area of 2.9476 hectares. The project comes under Category B, Activity 1(a), (i) as per the Schedule of EIA Notification 2006 (since it is below 50hectares) 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 the O.M. No. J-13012/12/2013-IA-II (I) dt. 24.12.2013 of Ministry of Environment and Forests, since the area of the project is below 25 hectares. The proposed project site falls Latitude (N) 11°47'40.76" N to 11°47'49.66"N and Longitude (E) 75°38'11.87"E to75°38'21.11"E.

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

BASIC INFORMATION OF QUARRY PROJECT
PART A

	Project details	
	File No.	**935 / SEIAA / EC4 / 3948 / 2015**
	Name / Title of the project	The building Stone Quarry (Minor Mineral) of Mr. Keeran Kumaran is situated at Survey Nos. 10/1, 18 of Kolavallor Village, Kunnothparamba Panchayat, Thalassery Taluk, Kannur District, Kerala in area of 2.9476 hectares.

	Name and address of project proponent.	**Mr. KEERAN KUMARAN** Reenalayam, East Valliayi Muthiyanga P.O., Pathayakkunnu, Kannur, Kerala-670691.
	Owner of the land	Mr. Keeran Kumaran (Private own land)
	Survey No. District /Taluk/ and Village etc.	Survey No. 10/1, 18 of Kolavallor Village, Kunnothparamba Panchayat, Thalassery Taluk, Kannur District, Kerala
	Details of period of lease or permit with number including the and expiry of lease/permit **(Copy to be attached)**	The quarry was working with short term mining permit valid up to September, 2015. The copy of short term mining permit is attached.
	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?	The quarry was working with short term mining permit valid up to September, 2015 The copy of short term mining permit is attached. The mining activities were stopped from September, 2015 onwards.
	Date of submission of Application	**28 / 09 / 2015**
	Brief description of the project.	The land for the proposed quarry is private owned land and the land is possessed in the name of Mr. Keeran Kumaran The targeted production of mine will be 71,000 MTA. The estimated project cost is Rs. 2.0 Crores. The expected life of mine estimated will be of about 10 years. The working will be carried out by opencast semi-mechanized method as per the approved Mining Plan.
	Details of Authorized Signatory and address for correspondence	**Mr. KEERAN KUMARAN** Reenalayam, East Valliayi Muthiyanga P.O., Pathayakkunnu, Kannur, Kerala-670691.
	Land Details	
	a) Extent of area in hectares	2.9476 hectare
	b) Is the property forest land/Govt. land /own land/patta land	Private Own Land
	c) Quantity of top soil/over burden produced and managed	A total estimated quantity of 18,864 cu. m. of topsoil is proposed to be removed during the mining operations. The topsoil excavated from the quarry will be dumped separately at pre-determined place and subsequently will be utilized in spreading over reclaimed areas for plantation.

		Precautions will be taken to limit the height of the topsoil dump to 5 to 6 meters in order to preserve its fertility and shelf life. It will be suitably protected from soil erosion and infertility by planting fodder grass and leguminous plants during temporary storage. About 8,842 cu. m of overburden will be generated throughout the mine life. This waste will be utilized within the pit for lying of haul roads. At the end use, OB can be reutilized as soil base for plantation.
	d) Latitude and Longitude	**Latitude (N)** 11°47'40.76"N to 11°47'49.66"N **Longitude (E)** 75°38'11.87"E to 75°38'21.11"E
	e) Topography of land and elevation	Part of the project land is exposed rock and the remaining land is covered with native trees, shrubs, herbs, grass, climbers, bushes etc. The highest elevation of the lease area is 115 m MSL and lowest is 95 m MSL. As the proposed area is low height hillocks, the drainage of the lease area is towards West. No habitants are located in the lease area.
	f) Slope analysis	The slope of lease area is towards West.
	g) Will there be any significant land disturbance resulting in soil erosion, subsidence & natural drainage.	Zone-III, Moderate damage risk zone as par BMTPC, Vulnerability atlas Seismic zone of India IS: 1893-2002.
	h) Access road to the site width and condition	7 m wide road
	i) Will there be any adverse impact on the aesthetics of the proposal site	No, the land used will be fully reclaimed and rehabilitated by backfilling the pits and plantation. Plantation and afforestation will add to the improvement in environment and aesthetic beauty of the area.
	Mining details	
	a) Minimum and Maximum height of excavation.	The exploitation of mineral will be done from 115 m to 90m MSL in conceptual phase.
	b) Life of mine proposed.	About 10 years
	c) Underground mining if any proposed	No, the working will be carried out by opencast semi-mechanized method as per the approved Mining Plan.
	d) Method of Mining	The working will be carried out by opencast semi-mechanized method as per the approved Mining Plan.
	e) Distance from the adjacent quarry	There is no quarry in operation within 500 m radius of the proposed quarry project.
	f) Cluster condition if any	Individual Application
	g) Has "No cluster certificate" submitted?	Yes, cluster certificate is already submitted with EC Application at page No. 168.
	h) Distance from nearby habitation	Nearest habitation is about 165m towards West side.
	i) Distance from	Aralam Forest, 12 km, NE.

	nearby forest, if applicable	
	j) Distance from protected area, Wildlife Sanctuary, National Park etc.	None within the study area
	k) Distance from nearby streams / rivers / National Highway and Roads	**Water Bodies:** 1. Ponniyam River, 3 km, W 2. Thodu Kalluvalappu, 1 km, W
	l) Is ESA applicable? If so distance from ESA limit	Not falling in ESA
	m) Has approved mining plan, prepared by RQP submitted?	Yes, the approved mining plan prepared by RQP is already submitted with EC Application
	n) Capacity of production in TPA	71,000 MTA
	o) Details of mining process	The mining will be done by open cast semi-mechanized method of mining. The bench height and width will be maintained 5 m. Excavated material is transported to the crusher unit existing near the complex for further processing. The ultimate depth of the mine workings is estimated to reach upto 90 m MSL.

	Details of Project cost	
	a) Land cost	**Rs. 2.0 Crores (All inclusive)**
	b) Plant and Machinery	**Rs. 2.0 Crores (All inclusive)**
	c) Total Cost	**Rs. 2.0 Crores (All inclusive)**
	V. Financial Statement including funding source and details of insurance etc.	**Rs. 2.0 Crores** **Insurance = Insurance to the quarry workers would provide through insurance company.** **Funding = Own source & bank loan**

	Management Plan	Air Pollution	Mining activities will generate certain quantities of dust during drilling, blasting, loading and transportation operations. The following measures will be taken to mitigate the fugitive dust from different operations. • Laying of haul road as per the standards, black topping of permanent haul road and service road to avoid or eliminate air –

		borne dust. • To avoid the dust generation from the drilling operations, wet drilling method will be adopted. • Drill machines will be equipped with dust collectors. • Use of appropriate explosives for blasting and avoiding overcharging of blast holes. • Controlled blasting techniques will be adopted. • Watering of haul road and other road at regular intervals. • Provision of dust filters/ mask to workers working at highly dust prone and affected areas. • Provision of green belt all along the periphery of the lease area. • Periodical monitoring of ambient air quality in and around the lease area. **The extracted mineral will be transported from the quarry to the end user by adopting following measures so as to minimize dust emissions.** • In case of long transportation the trucks after loading will be covered with tarpaulin sheets. • Speed of the vehicles will be maintained within the prescribed limits. • Trucks will not be over loaded and will be maintained to the body level
	Water Pollution	Provision of storm water collection pond with an appropriate capacity. The water requirement for sprinkling on sources of dust emission, on roads, landscaping etc. Can be met from the stored rainwater in the pond.
	Noise	The major noise generating source from the mining activity is working machinery, drilling, blasting and plying of vehicles. The following control measures are to be undertaken to bring down the noise levels:- • Proper maintenance of machinery, equipments and improvement on design of machines. • Use of personal protective devices i.e., earmuffs and earplugs by

			workers, who are working in high noise generating areas. • Creation of wide green belt of dense foliage between mine areas and residential colonies. • Proper training to personnel to create awareness about adverse noise level effects. • Planned noise monitoring at suitable locations in the plant and outside location for proper effective remedial actions.
		Solid Waste Management	**Topsoil Management** The topsoil excavated from the quarry will be dumped / stacked separately at pre-determined place and subsequently will be utilized in spreading over reclaimed areas for plantation as part of eco-restoration. Precautions will be taken to limit the height of the topsoil dump / stacked to 5 to 6 meters in order to preserve its fertility and shelf life. It will be suitably protected from soil erosion and infertility by planting fodder grass and leguminous plants during temporary storage. **Overburden Management** This waste will be utilized within the pit for lying of haul roads. At the end use, OB can be reutilized as soil base for plantation.
		Eco-restoration	The year wise programme of eco-restoration for the life of mine, about 3,000 trees will be planted in area 2.9201 ha.
	VI. Whether Environment Management Plan or Eco restoration Plan satisfactory?	Detailed Environment Management Plan is already submitted with E.C. Application	
	VII. Does it suggest mitigation measures for each activity	Detailed Environment Management Plan is already submitted with E.C. Application	
	VIII. If Pre-Feasibility Report (PFR) satisfactory	Detailed Pre-Feasibility Report (PFR) is already submitted with E.C. Application	
	IX. Does it need public hearing	No, Not required	
	X. Details of	No litigation pending	

	litigation and Court verdict if any	
	XI. Details of public complaint, if any	No public complaint received
	XII. Details of statutory sanction required	The following Govt. Orders / Policies are to be followed:- ➢ Kerala Minor Mineral Concession Rules, 2015. ➢ Mines Act, 1952 ➢ Explosive Rules, 2008 ➢ Kerala Panchayat Raj Act, 1994 ➢ Environment Protection Act, 1986 ➢ EIA Notification, 2006 / 2009 ➢ The Kerala Promotion of Tree Growth in Non-Forest Areas (Amendment) Act, 2007.
	XIII. If CRZ recommendation applicable?	Not Applicable
	PART B **Environment Impact Assessment and Mitigation Measures**	
	Impact on water	
	a) Details of water requirement per day in KLD	The total water requirement is about 5 KLD in which 1 KLD is for domestic which would be sourced from open well, 2 KLD for dust suppression system and 2 KLD for plantation purposes will be sourced from storm water pond.
	b) Water source/sources.	The total water requirement is about 5 KLD in which 1 KLD is for domestic which would be sourced from open well, 2 KLD for dust suppression system and 2 KLD for plantation purposes will be sourced from storm water pond.
	c) Expected water use per day in KLD.	5 KLD
	d) Details of water requirements met from water harvesting.	About 2 KLD for dust suppression system and 2 KLD for plantation purposes and will be sourced from storm water pond.
	e) What are the impact of the proposal on the ground water?	No significant impact envisaged on ground water due to the mining project.
	f) How much of the water requirement can be met from the recycling of treated waste water? (Facilities for liquid waste treatment)	No STP proposed for treatment of waste water.
	g) What is the incremental pollution load from waste water generated from the proposed activities?	The sewage to a tune of 0.80 KLD generated from the mine office will be diverted to the septic tank followed by soak pit.
	h) How is the storm water from within the site managed?	The run-off from the lease area will be suitably collected through channels and will be stored in storm water pond for further utilization in Mine. However, all measures will be taken not to disturb the natural drainage system of the surrounding area.
	Impact on Biodiversity and Eco restoration Programmes	
	d)Will the project involve extensive	Due to the mining activities, there will be loss of some native species and vegetation. However, some of these species will be planted at the end use for eco-

	clearing or modification of vegetation (Provide details)	restoration.
	What are the measures proposed to minimize the likely impact on vegetation (details of proposal for tree plantation/ landscaping)	The year wise programme of eco-restoration for the life of mine, about 3,000 trees will be planted in area 2.9201 ha.
	a) Is there any displacement of fauna – both terrestrial and aquatic. – If so what are the mitigation measures ? b) Presence of any endangered species or red listed category (in detail)	Not applicable No endangered species found at site.
	Impact on Air Environment	
	a) What are the mitigation measures on generation of dust, smoke and air quality	Mining activities will generate certain quantities of dust during drilling, blasting, loading and transportation operations. The following measures will be taken to mitigate the fugitive dust from different operations. • Laying of haul road as per the standards, black topping of permanent haul road and service road to avoid or eliminate air – borne dust. • To avoid the dust generation from the drilling operations, wet drilling method will be adopted. • Drill machines will be equipped with dust collectors. • Use of appropriate explosives for blasting and avoiding overcharging of blast holes. • Controlled blasting techniques will be adopted. • Watering of haul road and other road at regular intervals. • Provision of dust filters/ mask to workers working at highly dust prone and affected areas. • Provision of green belt all along the periphery of the lease area. • Periodical monitoring of ambient air quality in and around the lease area.
	b) Details of internal traffic management of the site.	**The extracted mineral will be transported from the quarry to the end user by adopting following measures so as to minimize dust emissions.** • In case of long transportation the trucks after loading will be covered with tarpaulin sheets. • Speed of the vehicles will be maintained within the prescribed limits. • Trucks will not be over loaded and will be maintained to the body level
	c) Details of noise from traffic, machines and vibrator and	The major noise generating source from the proposed activity is working machinery, drilling, blasting and plying of vehicles. The following control measures are to be undertaken to bring down the noise levels:- • Proper maintenance of machinery, equipments and improvement on design of

	mitigation measures	machines. • Use of personal protective devices i.e., earmuffs and earplugs by workers, who are working in high noise generating areas. • Creation of wide green belt of dense foliage between mine areas and residential colonies. • Proper training to personnel to create awareness about adverse noise level effects. • Planned noise monitoring at suitable locations in the plant and outside location for proper effective remedial actions.
	d) Impact of DG sets and other equipments on noise and vibration and ambient air quality around the project site and mitigation measures	No DG Set proposed
	e) Air quality monitoring in detail	The ambient air quality monitoring of the project site was carried out and the copy of report is already submitted with E.C. Application.
	Energy Conservation	
	a) Details of power requirement and source of supply.	The total power requirement will be 75 kW, which will be drawn from diesel engine. Fuel Quantity – 16 to 20 lt/ hr.
	b) Details of renewable energy (non – conventional) used.	The total power requirement will be 75 kW, which will be drawn from diesel engine. Fuel Quantity – 16 to 20 lt/ hr.
	Risk Management	
	(a) Are there sufficient measures proposed for risk hazards in case of emergency such as accident at the site?	Detailed Environment Management Plan is already submitted with E.C. Application
	(b) Are proposals for fencing around the quarry satisfactory? (c) Storage of explosives /hazardous substance in detail (d) Facility for solid waste	Barbed wire fencing will be done all around the quarry site. The stone quarry mine will result in increase in frequency of blasting for mining the mineral. However, controlled blasting with optimum charge of holes will be carried out to loosen the rock. Explosion hazards are envisaged due to mishandling of explosives. Explosives will be handled with utmost care in compliance of conditions imposed by Chief Controller of Explosive & Metalliferous Mines Regulation, 1961. Top soil and over burden generated from the site will be stored separately on earmarked place and will be used for eco-restoration and internal road development.

management	

Socio Economic Impacts

a) Will the project cause adverse effects on local communities disturbance to sacred sites or other cultural values. What are the safe guards proposed?	The proposed project will directly / indirectly develop the area by providing employment opportunities. With the proposed development in and around the area there will be supporting facilities/ infrastructure eventually leading to the development of the area.
b) Will the proposal result in any changes to the demographic structure of local population. If so, provide details.	The project site is private owned land. There is expected to be change in the land use as mining area in the core zone. The highest elevation of the lease area is 115 m. MSL and lowest is 95 m MSL. As the proposed area is hilly, the drainage is towards West side. However, any other significant impact will be confined within the lease area.
c) Are the CSR proposals satisfactory. Give details	

Sl. No	Areas of Intervention	No. of Intervention	Recurring Expenses (in Rs.)	Non Recurring Expenses (in Rs.)
1	Environmental sustainability	2	1,45,000	1,10,000
2	Help the hapless	2	3,00,000	3,50,000
3	Infrastructure development	2	2,50,000	3,75,000
4	Promotion of Education	1	2,00,000	Nil
	Total	7	**8,95,000**	**8,35,000**

Detailed CSR need assessment report is already submitted with E.C. Application.

What are the projects benefits in terms of employment potential?	Due to the mining activity and due to the attached ancillary unit, there will be workers attracted to the project area. It is proposed to employ 20 persons in the project.

PART C

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

Summary and Conclusion

Overall justification for implementation of the project.	It is predicted that socio-economic impact due to this project will positively increase the chance of more employment opportunities for local inhabitants. There are no Resettlement and Rehabilitation issues involved in this project. The project infrastructures will be of use to people of the area. The revenue of the State Govt. will be definitely increasing due to the proposed activity. The entire project area is devoid of any endangered flora and fauna. **It is proposed to reclaim the land and develop green cover for eco-restoration with native species to a maximum possible extent. Additionally, an area is earmarked outside the proposed**

		mining area for compensatory mass plantation. Also, a storm water pond is proposed outside the mining area for storage of rain water and for its subsequent use so as to conserve fresh water consumption. Thus the proposed project is not likely to affect the environment or adjacent ecosystem adversely.
	a) Explanation of how adverse impacts have been mitigated.	Detailed Pre-Feasibility Report (PFR) is already submitted with E.C.

2. The proposal was considered in the 57th Meeting of SEAC, held on 16 -17th June, 2016.The committee deferred the item for site inspection by a team consisting of Sri. John Mathai, Sri. Khaleel Chovva and Dr. Hari Kumar. The Proponent agreed to spend 9 lakhs (recurring) and 8 lakhs (non-recurring) expenditures towards community welfare activities for a period of next 5 years and agreed to take up the projects in consultation with the local body.

Field visit to the Quarry project site of Sri. Keeran Kumaran in Kolavallur Village, Thalasserry taluk, Kannur District, Kerala was carried out on 17.07.2016 by the sub-committee of SEAC, Kerala, comprising Dr. P S Harikumar, Dr. K M Khaleel and Sri. John Mathai. The Proponent along with his team was present at the site at the time of site visit.

The project is located at about 2 km SSE of Cheruvancherry. The approach is presently through a katcha road that needs to be widened and surfaced. The land proposed to be quarried is owned by others but taken on lease by the proponent. The area includes part of an existing quarry operated with permit. The worked out part of the quarry presents steep cliff like faces. Benches are yet to be formed. Boundary is partly fenced and corner pillars erected with GPS coordinated painted on them. The proposed lease area includes the side slopes and the central valley. Top soil and OB is relatively thick in the central valley part with coconut and other seasonal crops. The slopes are under rubber. The storm water from the entire area is presently channelized through the central valley part. Dwelling units of the proponent and associates are not seen around. Crusher unit is not planned. Based on an overall evaluation of the site, following aspects may be considered before it is recommended for EC

- *The central valley portion with thick soil cover and vegetation should be excluded from the quarry area. Such area should be demarcated with boundary pillars and intimated.*
- *The entire quarry area should be fenced all around.*
- *The approach road must be well laid and properly surfaced.*
- *Working to be in the form of benches. Steep cliff like sections to be left as danger zones with proper sign boards.*
- *Top soil and over burden should be stored in a designated place on the lower slope away from the working area. Part of it may be used for the eco-restoration of old*

working pits.

- *Storm water should be clarified before it is let out. A RWH structure should also be in place.*
- *Assurance that green belt will be provided around the periphery.*
- *Statutory facilities like drinking water, canteen, rest room etc. should be provided to the workers in the quarry.*
- *The quarry should have sign boards displayed at appropriate places.*
- *The CSR activity needs revision addressing the needs of the locality as suggested.*

3. The proposal was considered in the 61st meeting of SEAC held on 11th August 2016. The Committee after examining the mining plan, prefeasibility report, field inspection report and all other documents submitted decided to deferred the item for the submission of following documents:

1. The central valley portion with thick soil cover and vegetation should be excluded from the quarry area. Such area should be demarcated in the field with boundary pillars, marked on the plan and intimated.
2. The entire quarry area should be fenced all around.
3. The approach road must be well laid and properly surfaced
4. Revised and more realistic CSR should be submitted as suggested.
5. Detailed site plan of the area satisfying these conditions.

Subsequently the proponent submitted the above mentioned documents sought by the 61st SEAC.

4. The proposal was considered in the 69th meeting of SEAC held on 9th and 10th March 2017. The Committee verified the additional documents submitted by the proponent and found satisfactory. The Committee appraised the proposal based on the Mining Plan, Pre-feasibility Report, field visit report and all other documents submitted along with Form1. The Committee decided to **Recommend for Issuance of EC** subject to the following specific conditions in addition to the general conditions.

1. *As per the modified site plan given, demarcated central valley portion shall be excluded from mining.*
2. *The entire quarry area should be fenced all around.*
3. *The approach road must be well laid and properly surfaced*
4. *If any plant species endemic to Western Ghats are noticed in the area they shall be properly protected in situ or by transplanting to an appropriate location inside the lease area.*

The proponent agreed to set apart Rs.7.5 lakh (non-recurring) and Rs.7.5 lakh per annum (recurring)for CSR activities. The proponent also agreed to spend this amount in consultation with the local Panchayat for the welfare of the local community.

5. The proposal was considered in the 68th meeting of SEIAA held on 12th May 2017. The Authority decided to issue EC subject to the strict implementation of all specific conditions in addition to the general conditions. All the pre-mining conditions suggested by the inspection report of SEAC should be implemented before start mining. An affidavit to this effect should be submitted before the issuance of EC

6. The proponent has submitted an affidavit vide reference 6th cited, satisfying all the above conditions. Environmental clearance as per the EIA notification 2006 is hereby accorded for the proposed building stone quarry project in Sy. Nos. 10/1,18 at Kolavallur Village, Thalassery Taluk, Kannur District, Kerala by Sri.Mr.Keeran Kumaran, Reenalayam, East Valliayi, Muthiyanga P.O., Pathayakunnu, Kannur, Kerala State -670691 for an area of 2.9476 hectares, subject to the specific conditions as recommended by SEAC in para 4 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.

7. The clearance issued will also be subject to full and effective implementation of all the undertakings given in the application form, mitigation measures as assured in the Environment Management Plan and the mining features including progressive mine closure plan as submitted with the application and relied on for grant of this clearance. The above undertakings and the conditions and the undertakings in Chapter 4 (Mining), Chapter 5 (Blasting), Chapter 6 (Mine Drainage), Chapter 7 (Stacking of Mineral rejects and Disposal of waste) Chapter 11 (EMP) Chapter 12 (Progressive Mine Closure Plan) of the Mining Plan as submitted will be deemed to be part of this proceedings as conditions as undertaken by the proponent, as if incorporated herein.

8. 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.

9. 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, Kannur 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.Mr.Keeran Kumaran, Reenalayam, East Valliayi, Muthiyanga P.O., Pathayakunnu, Kannur, Kerala State -670691.

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

To,

Sri.Mr.Keeran Kumaran,
Reenalayam, East Valliayi,
Muthiyanga P.O.,
Pathayakunnu, Kannur,
Kerala -670691

Copy to,

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

Forwarded/By Order

Administrator, SEIAA

STATE ENVIRONMENT IMPACT ASSESSMENT AUTHORITY KERALA

GENERAL CONDITIONS (for mining projects)

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

30. Consent from Kerala State Pollution Control Board under Water and Air Act(s) should be obtained before initiating mining activity.

31. All other statutory clearances should be obtained, as applicable, by project proponents from the respective competent authorities including that for blasting and storage of explosives.

32. In the case of any change(s) in the scope of the project, extent quantity, process of mining technology involved or in any way affecting the environmental parameters/impacts as assessed, based on which only the E.C is issued, the project would require a fresh appraisal by this Authority, for which the proponentshall 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 45^0. 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 PM_{10} 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 thisimplementation 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