



Validity expires on 16/03/2023

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. 70/4, 203/10, 11-2, 11-3, 11-7, 11-8, 12-1, 12-2, 12-4, 13, 14-1, 14-2,
14, 24, 204/5-1, 5-2, 5-3-1, 7-1-1, 7-1-2, 15-1, 15-2, 17, 18, 19, 22, 205/1-1,
2-1, 2, 22-1, 22-1, 265/1 pt, 265/2 pt, 265/6, 266/2 pt, 266/3 pt, 267/3,
267/3-1, 3-2, 3-3, 3-4, 3-5-2, 3-6, 268/2, 274/14,15, 23-1, 23, 24-1 and 24-2 at
Pallichal Village, Neyyattinkara Taluk, Thiruvananthapuram District, Kerala
by Sri. Thomas Philip for M/s Metro Aggregates and Sand (1)Pvt.Ltd
Granted – Orders issued.

STATE ENVIRONMENT IMPACT ASSESSMENT AUTHORITY, KERALA

No. File No.171/SEIAA/KL/3501/2013

Dated, Thiruvananthapuram 17/03/2018

- Ref:
1. Application received on 09/12/2013 from Mr.Thomas Philip, M/s,Metro Aggregates & Sand India Pvt.Ltd, Edacode, Nemom, Thiruvananthapuram
 2. Minutes of the 25th meeting of SEAC held on 14/15 Feb 2014
 3. Minutes of the 58th meeting of SEAC held on 28/29th June 2016
 4. Minutes of the 59th meeting of SEAC held on 11th and 12th July, 2016
 5. Minutes of the 62nd meeting of SEAC held on 6/7-09-2016
 6. Minutes of the 63rd SEAC meeting held on 04th October 2016
 7. Minutes of the 78th meeting of SEIAA held on 15th December 2017.
 8. Minutes of the 83rd meeting of SEAC held on 20th & 21st December 2017.
 9. Minutes of the 79th meeting of SEIAA held on 09th January 2018
 - 10 Minutes of the 86th meeting of SEAC held 27th February 2018
 - 11 Minutes of the 87th SEAC meeting scheduled to be held on 12th March 2018
 - 12 Minutes of the 82nd meeting of SEIAA held on 15th March 2018
 - 13 Affidavit dated on 16.03.2018 from Mr.Thomas Philip, M/s Metro Aggregates & Sand India Pvt.Ltd

14 The copy of court order from Mr.Thomas Philip t received in the office on 17/03/2018.

ENVIRONMENTAL CLEARANCE NO. 67 /2018

Sri. Thomas Philip has applied for Environmental Clearance vide application received on 09.12.2013 for the quarry project of M/s Metro Aggregates and Sand (I) Pvt. Ltd. for an area of 2.2713 Hectares of land in Sy. Nos. 267/3, 266/2pt, 265/1pt , 265/2pt & 266/3pt and in an area of 7.6047 hectares of in Sy Nos. 70/4, 203/10, 11-12,11-3,11-7,11-8,12-1, 12-2, 12-4, 13, 14-1, 14-2, 14,24,204/5-1,5-2,5-3-1,7-1-1,7-1-2,15-1,15-2,17,18,19,22,205/1-1, 2-1,2,22-1,265/6, 267/3-1,3-2,3-3., 3-4, 3-5-2, 3-6, 268/2,274/14,15,23-1, 23, 24-1,24-2 at Pallichal Village, Neyyattinkara Taluk, Thiruvananthapuram District, Kerala for the purpose of extraction of minor minerals.

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

PROJECT DETAILS	
File No.	171/SEIAA/KL/3501/2013
Name /Title of the project	Building Stone Quarry of M/s. Metro Aggregates & Sand (I) Pvt. Ltd.
Name and address of project proponent.	Mr. Thomas Philip, Managing Director Metro Aggregates & Sand (I) Pvt. Ltd RegdOffice:32/2982. B. Sahrudaya Buildings Ponnurunni, Vyttila PO. Ernakulum Kerala State – 682019
Owner of the land	M/s. Metro Aggregates & Sand (I) Pvt. Ltd. RegdOffice:32/2982B, Sahrudaya Buildings, Ponnurunni, Vyttila PO. Ernakulum Kerala State – 682019
Survey No. District/Taluk/ and Village etc.	70/4, 203/10, 11-2, 11-3, 11-7, 11-8, 12-1, 12-2, 12-4, 13, 14 -1, 14-2, 14, 24, 204/5-1, 5-2, 5-3-1, 204/7-1-1, 7-1-2, 15-1, 15 -2, 17, 18, 19, 22, 205/1-1, 2-1, 2, 22-1, 22-1, 265/1, 2, 6, 266/2, 3, 267/3, 3-1, 3-2, 3-3, 3-4, 3-5-2, 3-6, 268/2 & 274/14, 15, 23-1, 23, 24-1,& 24-2 of Pallichal Village, Neyyattinkara Taluk, Thiruvananthapuram District, Kerala State.
Category/Sub Category and Schedule	B-2
Details of period of lease or permit with number including the beginning and expiry date of lease/permit period (Copy to be attached)	22-09-2008 upto 21-09-2018 NO.370/2008-09/8069/M3/2008, Dated.20-09-2008
Present Status of the project	Working
Date & Year of starting the work of	01-04-2009 & 2009

the quarry project.	
Whether the quarry is working at present or not ?	Yes
If stopped working since when?	-NA-
Date of submission of Application	09-12-2013
Brief description of the project.	M/s. Metro Aggregates & Sand (I) Pvt Ltd., is a private company working on Crushers & Quarries of Granite building stone. Now company is intending to do quarrying in large scale.
GPS Co-ordinate	Latitude (N): 8° 27' 28.9" to N : 8° 27' 35.2"
	Longitude(E): 76° 01' 26.8" to E : 76° 01' 38.9"
Details of Authorized Signatory and address for correspondence	Mr. Thomas Philip, Managing Director Metro Aggregates & Sand (I) Pvt Ltd Edakkodu, Nemom..PO.695020 Kerala State Phone : 9847059000/9544200130
LAND DETAILS	
Extent of area in hectares	9.8760 Hec
Is the property forest land/Govt. land/own land/patta land	Own land
Quantity of top soil/over burden produced and managed	23,000 tons
Latitude and Longitude	N : 8° 27' 28.9" to N : 8° 27' 35.2" E : 76° 01' 26.8" to E : 76° 01' 38.9"
Topography of land and elevation	As per revenue record the land is private land.
Slope analysis	Terracing is always accompanied with plantation for stabilization of terraced slopes. It is always ensured that the average height of the dump does not exceed 10.0 m in each phase of dumping.
Will there be any significant land disturbance resulting in soil erosion, subsidence & natural drainage.	-NO-
Access road to the site width and condition	7 Meter wide tar road
Will there be any adverse impact on the aesthetics of the proposal site	-NO-
MINING DETAILS	
Minimum and Maximum height of excavation.	Highest - 125 MSL
Life of mine proposed.	Lowest - 65 MSL
Underground mining if any proposed	-NO-
Method of Mining	Given in EMP
Distance from the adjacent quarry	-Nil-
Cluster condition if any	-Nil-

Has "No cluster certificate" submitted?	-Nil-	
Distance from nearby habitation	54 m & 61 m from the quarry area towards north west and north respectively.	
Distance from nearby forest, if applicable	-Nil-	
Distance from protected area, Wildlife Sanctuary, National Park etc.	-Nil	
Distance from nearby streams/rivers/National Highway and Roads	River Karamana is at a distance of 1.50 Kms from the quarry lease and lies towards north west	
Is ESA applicable? If so distance from ESA limit	-No-	
Has approved mining plan, prepared by RQP submitted?	-Yes-	
Capacity of production in TPA	6, 50,000 Tonnes per annum (max.)	
Details of mining process	Given in EMP	
DETAILS OF PROJECT COST		
Land cost	Rs. 2.0 Crore	
Plant and Machinery	Rs. 5.5 Crore	
Total Cost	Rs. 8.0 Crores (Includes construction cost)	
Financial Statement including funding source and details of insurance etc.	Quarry is in operation lessee is financially sound.	
Environment Management Plan	Air Pollution	Regular monitoring will be carried-out
	Water Pollution	Regular monitoring will be carried-out
	Noise	Regular monitoring will be carried-out
	Solid Waste Management	Will be stored and utilized for construction purpose.
	Eco-restoration	Quarry pit will be converted as a water pond.
Whether Environment Management Plan or Eco restoration Plan satisfactory?	Submitted	
Does it suggest mitigation measures for each activity	Given in EMP	
Is Pre-Feasibility Report (PFR) satisfactory	Yes	
Does it need public hearing	No	
Details of litigation and Court verdict if any	Nil	
Details of public complaint, if any	No	
Details of statutory sanction required	Submitted	
If CRZ recommendation applicable?	No	
PART B		

ENVIRONMENT IMPACT ASSESSMENT AND MITIGATION MEASURES	
Details of water requirement per day in KLD	84.40 KLD
Water source/sources.	Open Well
Expected water use per day in KLD.	84.40 KLD
Details of water requirements met from water harvesting.	0.9200 ha will be converted as water pond
What are the impact of the proposal on the ground water?	Vehicle fuelling will be conducted at a centralized fuelling facility off site that has proper containment and spill response capability.
How much of the water requirement can be met from the recycling of treated waste water? (Facilities for liquid waste treatment)	Domestic effluent will be generated and will be disposed off to septic and soak pit constructed as per CPCB norms. The discharge point would be to ground.
What is the incremental pollution load from waste water generated from the proposed activities?	Nil
How is the storm water from within the site managed?	Before onset of monsoon, drains are cut along toe of the quarry faces to divert the surface run off. Garland drain is provided at the quarry top to regulate monsoon water and direct the same to the settling ponds / quarry pit to contain the quarry wash off and to avoid the same joining to the adjoining surface water bodies / water courses. It also helps to avert eventual collapses and damages to the quarry faces. The pit will be fenced, such that no habitats can enter the pit. And watch and ward is provided round the clock.
IMPACT ON BIODIVERSITY AND ECO RESTORATION PROGRAMMES	
Will the project involve extensive clearing or modification of vegetation (Provide details)	Since the quarry is granted and it is in operation, most of the quarry area is cleared and part of the quarry area is covered by rocky material.
What are the measures proposed to minimize the likely impact on vegetation (details of proposal for tree plantation/ landscaping)	Rubber trees are planted all around.
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)	No
IMPACT ON AIR ENVIRONMENT	
What are the mitigation measures on generation of dust, smoke and air quality	<ul style="list-style-type: none"> Wet drilling will be followed so that the dust emission to atmosphere is minimized, Proper blasting pattern will be followed for effective rock fragmentation and generation of minimal fine dust to open atmosphere, Water spraying arrangement on haul road and other critical locations,
Details of internal traffic management	Existing road is catering to average density of traffic and

of the site.	that expected incremental increase in road traffic due to the proposed activities would not exceed has 13 trucks per day and would make no significant changes on the traffic load situation at quarry site.															
Details of noise from traffic, machines and vibrator and mitigation measures	<ul style="list-style-type: none">Personnel who are exposed to critical locations in the quarry will be provided with PPEs,Fitness of all the transport and HEMMs will be ensured,Acoustic enclosures will be provided for DG sets,Corrective & preventive maintenance will be carried for all HEMMs so that they operate effectively,Greenbelt will be developed, which will act as an acoustic barrier for noise transmission															
Impact of DG sets and other equipments on noise and vibration and ambient air quality around the project site and mitigation measures	Analysis reports are submitted															
Air quality monitoring in detail	Analysis reports are submitted															
ENERGY CONSERVATION																
Details of power requirement and source of supply.	Lighting 0.5 KVA used from solar energy															
Details of renewable energy (non - conventional) used.	Alternative energy resources are 1 Nos. of DG. Sets															
RISK MANAGEMENT																
Are there sufficient measures proposed for risk hazards in case of emergency such as accident at the site?	Sufficient measures are taken															
Are proposals for fencing around the quarry satisfactory? Storage of explosives/hazardous substance in detail Facility for solid waste management	Yes															
SOCIO ECONOMIC IMPACTS																
Will the project cause adverse effects on local communities disturbance to sacred sites or other cultural values. What are the safe guards proposed?	No. Fencing around quarry is done.															
Will the proposal result in any changes to the demographic structure of local population. If so, provide details.	No															
Details of CSR commitment	<table><tr><th colspan="3">CSR Activities proposed to be carried out</th></tr><tr><th>Sl.No</th><th>Particulars</th><th>Amount in Rs.in lakhs</th></tr><tr><td>.1</td><td>Local Welfare & Developmental activities</td><td>Rs.15,00,000.00(Fifteen Lakhs)/Every Year</td></tr><tr><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td></tr></table>	CSR Activities proposed to be carried out			Sl.No	Particulars	Amount in Rs.in lakhs	.1	Local Welfare & Developmental activities	Rs.15,00,000.00(Fifteen Lakhs)/Every Year						
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What are the projects benefits in terms of employment potential?	About 120 people get employment directly and indirectly.
PART C	
Details of NABET approved EIA Consultant engaged-Their name, address and accreditation details	METAMORPHOSIS Project Consultants Pvt. Ltd., QCI/NABET Accreditation serial no. NABET/EIA/1215/141
SUMMARY AND CONCLUSION	
Overall justification for implementation of the project.	<ul style="list-style-type: none"> • There will be environmental impact from the project since the scale of operation is very minimum • There will be no major environmental impact due to proposed ornamental stone quarrying. This operation doesn't need relocation of any habitats. • The project provides employment opportunities to the people of surrounding area, in turn helps in improving the economic status of the present population. • Also there are many similar quarry operations working in the vicinity. • Considering the overwhelming aspects the project can be treated as "B2 Category" and requested to accord Environmental Clearance for this project.
Explanation of how adverse impact have been mitigated.	As per defined in the EMP

2. The matter was considered by 25th meeting of SEAC held on 14/15 Feb 2014 in view of Form 1, Pre-feasibility cum Environment Management Plan, Questionnaire for mining projects and Location sketch. The Committee observed with concern that Mukkunnimala Reserve Forest is about 240 m from the project site and as stated by the proponent, there are three functional quarries in the Mukkunnimala region. The Committee asked the proponent as to why he has submitted application only for an area of 9.8760 hectares when he owns 62 acres of land. To this end the proponent stated that out of the total area owned by him, under the name of different companies, only 9.8760 hectares have resources and the remaining area is not suitable for extracting resources. However the Committee directed the proponent to provide the ownership details of entire 62 acres of land owned by him.

The Committee asked the proponent as to whether they have conducted any quarrying activities in the site, as seen from the Google image. To this end the proponent stated that quarrying activities was already done by the earlier owner of the land and hence is not a new one. The proponent is asked to provide Google map specifically marking the total area owned by the proponent demarcating the proposed mining area for which the present application is submitted along with the present land use in the entire area owned by him. The proponent has not provided the depth of water table in the site and is directed to provide the same. Regarding the activities proposed towards CSR, the proponent has stated that they shall continue the same activities this year also has done in the last year. To this end the proponent is directed to provide documentary evidence regarding the amount already spent towards CSR.

Considering the above, the 25th meeting of SEAC held on 14/15-02-2014, deferred the item for site visit especially to ascertain the quarrying activities in the Mukkunnimala region and directing the proponent to provide the following to SEAC for further processing of the application:

1. Ownership details of entire 62 acres of land owned by the proponent.
2. Google map specifically marking the total area owned by the proponent demarcating the proposed mining area for which the present application is submitted.
3. Present land use in the entire area owned by the proponent.
4. Depth of water table in the site.
5. Documentary evidence regarding the amount already spent towards CSR.

3. 58th meeting of SEAC held on 28/29th June 2016 has considered the matter and deferred for presentation for mining plan. The proponent has submitted revised mining plan as per KMMCR-2015. But other clarifications sought by the 25th meeting of SEAC were not submitted. The submitted mining plan carries 2 parts and a single form-1. So the proponent had been requested to submit either composite mining plan or individual applications as per SEAC Agenda item No. 58.03. On discussion with SEIAA proponent had submitted 2 form-1 applications without individual PFR.

4. 59th meeting of SEAC held on 11th and 12th July, 2016 appraised the proposal based on the mining plan, pre-feasibility report and all other documents submitted along with the Form I application. While presenting the proposal, the committee observed that the mine closure plan is common to the application for agenda item no. 59.02 (File no.171 (B)/SEIAA/KL/3501/2013). Hence both the proposals were appraised as a single unit. The Committee deferred the item for field visit. And the proponent was directed to submit the following additional documents.

1. Document regarding ownership of the proposed land and approach road.
2. Cadastral map marked with boundaries of the lease area, additional area and total area under the ownership of the proponent.
3. Copy of the certificate from village officer regarding nature and ownership of the land.
4. The proponent should submit more realistic CSR

Field visit to the Quarry project sites of M/s Metro Aggregates and Sand, Pallichal Village, Neyyittinkara taluk, Thiruvananthapuram district, Kerala was carried out on 19.08.2016 by the sub-committee of SEAC, Kerala, comprising Sri. P. Sreekumaran Nair and Sri. John Mathai. The representatives of the Proponent were present at the site at the time of site visit. The original single application for 9.876 ha is now revised and split into two as it covers two separate lease areas. File 171(A) is for an existing lease of 2.2713 ha and File 171(B) is for a new area of 7.6047 ha. This report covers both the areas, considering the fact

that the two projects are adjacent to each other under the same management and planned to be worked as a single quarry.

Based on an overall evaluation of the site, following aspects may be considered before it is recommended for EC

- *The certificate that the proposed quarry area is not assigned for any special purposes.*
- *Certificate from DMG regarding details of quarry leases/permits within 500 m vicinity.*
- *The external boundary pillars with GPS values must be permanently placed embedding it properly on the ground.*
- *Working to be in the form of benches with height not exceeding 5 m and width not less than 5 m. Top to bottom approach of quarrying is to be followed. Cliff like faces should be avoided.*
- *Quarrying in survey no 204/5 is to be avoided as it can adversely affect Valiyakulam pond.*
- *Top soil and Over burden stored in the lower slope should be provided with protective support walls. It should not get washed away into the valley.*
- *The present mechanism of disposal of storm water into the valley slopes through the pipes without clarification need modification. A RWH structure in the form of a pond should be in place in this valley into which the storm water can be led. Proper mechanism for clarification must be ensured.*
- *Assurance that green belt will be provided around the periphery.*
- *The quarry should have sign boards displayed at appropriate places*
- *The CSR activity needs revision addressing the needs of the locality as suggested.*

5. In light of the inspection report the matter was placed in the 62nd meeting of SEAC held on 6/7-09-2016 without the clarifications sought for by 59th meeting of SEAC held on 11th and 12th July, 2016. In the meantime the proponent has submitted the same. The committee appraised the proposal based on the mining plan, pre-feasibility report, field inspection report and all other documents submitted by the proponent. The Committee observed that presently an exhaustive verification is being conducted in Mukkunnimmala area by the different agencies of the Government. The Sub Committee members also informed about the confusion regarding the actual identifications of the survey parcels. In the light of the above the Committee decided to wait for the emergence of a clear picture regarding the status of land in Mukkunnimala area and hence decided to defer the item. Meanwhile the proponent can be asked to comply with the following

- Submit copy of the certificate that the proposed quarry area is not assigned for any special purposes.
- The external boundary pillars with GPS values must be permanently

placed embedding it properly on the ground.

- The CSR activity needs revision addressing the needs of the locality as suggested.

6. The proposal was placed before 63rd SEAC meeting 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 and decided to defer the item for the finalization of on-going Survey operations in the Mukkunnimala Region, and completion of all the enquiries by various Govt. Agencies.

In the meantime the proponent has approached the Hon'ble High Court of Kerala and filed a writ petition, WPC no. 24005/2017 where SEIAA is the second respondent. The Hon'ble High Court vide Judgement directed SEIAA to take a decision on the application for Environmental clearance within two months of the receipt of the copy of the judgment.

7. The proposal was placed in the 78th meeting of SEIAA held on 15th December 2017. Authority decided that urgent action may be taken within one month after obtaining report from SEAC. Hence the proposal is returned to SEAC to give a report within two weeks to comply with court orders.

8. The proposal was placed in the 83rd meeting of SEAC held on 20th & 21st December 2017. The Committee examined the suggestion communicated by SEIAA. The Committee had earlier deferred the proposal for the completion of ongoing survey operations in the Mukkunnimala Region, and completion of all the enquiries by various Govt. Agencies. Only on receipt of the details it can be conclusively ascertained whether the area proposed for mining does really belong to the proponent, for no clear cut demarcation on the field delineating the area belonging to the Government and private individuals is available in Mukkunnimala region. Therefore the Committee decided to recommend to SEIAA to defer the proposal till receipt of the above details. The Committee also decided to request Secretary, SEAC to ascertain the latest position in this regard from the District Collector, Thiruvananthapuram.

9. The proposal was placed in the 79th meeting of SEIAA held on 09th January 2018. As the boundary of the project is not demarcated and surveyed, the Authority accepted the recommendation of SEAC and decided to defer the item till the completion of ongoing survey operations in the Mukkunnimala Region, and completion of all the enquiries by various Govt. Agencies.

10. The Committee in its 86th meeting held 27th February 2018 observed that the communication from the Special Government Pleader to Additional Advocate General refers in WP(C) 1719/2018 filed by Metro Aggregates & Sand India Pvt. Ltd. The Committee also observed that on receipt of the above communication, Secretary to the Committee has promptly contacted the District Collector, Thiruvananthapuram for making available a copy of Survey report prepared by Vigilance & Anti Corruption Bureau as part of the enquiry into the quarrying in Mukkunnimala area. But the District Collector on 26.02.2018 itself intimated that such a survey report is not available with them and advised to contact Vigilance & Anti Corruption Bureau itself. In order to take a

considered view in the matter a copy of the survey report is a must. Hence the Committee decided to request the Secretary to take the following urgent steps.

1. Contact office of Superintendent of Police, Vigilance & Anti Corruption Bureau, Special Investigation Unit -2, Kunchalumoodu, Karama P.O, Tvpm for a copy of the Survey report with respect to the enquiry in Mukkunnimala area.
2. To request the proponents.
 - a). Clearly demarcate the property on the ground with pillars.
 - b). Also to produce a certificate from the District Geologist to the effect that the survey numbers mentioned in their proposals are free from any irregularities and are fit to be leased by Government for quarrying.
3. To request the District Geologist to accompany the Sub Committee to conduct a second site visit in the presence of the proponents, so as to verify the authenticity of the area demarcated in the field.

Since the period of the Committee is expiring on 18.03.2018, the Committee decided to request the Secretary to pursue action on the above points without delay.

Accordingly site visit was carried out in and around the proposed quarry lease area of M/s Metro aggregates and sand on 08.03.2018 by the Sub-Committee of SEAC, Kerala comprising Dr. Oommen V. Oommen, Dr. Harikrishnan, K and Sri. John Mathai. As per the request, Dr. Preeja.N.B (District Geologist), Sri. Selvaraj.D.S (Village Officer, Pallichal) and Sri. Anil Kumar.B (Special Village Officer, Pallichal) joined the Sub-Committee for the site inspection.. The area projected under the approved mine plan and the corresponding land indicated in the FMB plan (copy) were cross checked by the team for its accuracy. Four survey parcels and the boundary of Re.sy no 270 and 271 were also identified in the field.

The proposed lease site of M/s Metro aggregates and sand falls in resurvey numbers 203, 204, 205, 265, 266, 268, 267 and 274. Additional land falling in resurvey numbers 202 and 264 are reported to be in the possession of the company. The area projected for quarrying as per the approved mine plan was cross checked with the survey sketch provided by the Village Officer as well as the approved Block map (Cadastral map) in which the survey numbers fall. Several points located on the NW, SW and near to the Edamala temple were traced on the ground. Specifically the boundary of synos 70 and 203; 268 and 203; 70, 71 and 203; location of Valiyakulam boundary of 264 and 275 were traced on the ground. However, the boundary of the land with existing lease and the land proposed for lease is not easily traceable as the survey stones along the internal boundary are removed during the quarrying and land development activity. Quarrying is on-going at the site on the strength of a valid lease. This site is located on the south-eastern side of Mukkunnimala hill and does not form part of the hill.

Though both quarry sites are located in Mukkunnimala region, these sites are not physically contiguous to the hill and are separated by a valley in between. The location as per survey plan and approved Mining plan has been established in the presence of the District Geologist and Village Officer. Hence both the sites can be recommended for EC subject to the conditions in the earlier site inspection report and fulfilment of other

conditions. A copy of the report prepared at the site in the presence of the above officers is appended.

The sub-committee also tried to identify the precise location of Mukkunnimala on the basis of the survey numbers depicted in the Block map of Block 4 falling under Pallichal village, Neyyattinkara taluk and the topographic map of Survey of India (58H/3 NW). The hill stands out as an elongated conical shaped structure with close contours from about 110 m elevation amsl. The elevation at the peak of the hill is 248 m amsl. Survey numbers 27, 28, 29, 30, 31, 48, 49, 50, 67, 68, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 368, 369, 370, 371 and 372 cover the area under the hill. Considering the presence of defence installations and the need to protect the area falling in the elevated part of the hill, it is better to avoid any kind of land disturbance in the above listed numbers. On a cursory examination it is seen that three quarries with crusher are operating currently in the hill side. This activity needs to be curbed at the earliest.

The proponent has also been intimated vide letter no.171/SEIAA/KL/3501/2013 dt.06.03.2018 regarding a personal hearing in the 87th SEAC meeting scheduled to be held on 12th March 2018 with documents as sought by SEAC.

11. The proposal was placed in the 87th meeting of SEAC held on 3rd March 2018. Though the reply from the Superintendent of Police, Vigilance & Anti Corruption Bureau to the request for making available a copy of the survey map prepared in connection with the detailed enquiry into the quarrying operations in Mukkuinnimala is not yet received, the Sub Committee which conducted a second inspection of the site on 08.03.2018 in the presence of the District Geologist and the Village Officer, Pallichal is convinced about the veracity of the survey numbers and the location of the proposed quarry. After studying the environmental impacts of the proposal and examining the Sub Committee reports and all the available records, the Committee decided to Recommend to issuance of EC for a total area of 9.8760 ha in Sy. Nos. 70/4, 203/10, 11-2, 11-3, 11-7, 11-8, 12-1, 12-2, 12-4, 13, 14-1, 14-2, 14, 24, 204/5-1, 5-2, 5-3-1, 7-1-1, 7-1-2, 15-1, 15-2, 17, 18, 19, 22, 205/1-1, 2-1, 2, 22-1, 22-1, 265/1 pt, 265/2 pt, 265/6, 266/2 pt, 266/3 pt, 267/3-1, 3-2, 3-3, 3-4, 3-5-2, 3-6, 268/2, 274/14, 274/15, 23-1, 23, 24-1 and 24-2 subject to general conditions in addition to the following specific conditions:

1. Quarrying in survey no 204/5 is to be avoided as it can adversely affect existing Valiyakulam, a public pond.
2. Top soil and Over burden stored in the lower slope should be provided with protective support walls. It should not get washed away into the valley.
3. The present mechanism of disposal of storm water into the valley slopes through the pipes without clarification need modification. A RWH structure in the form of a pond should be in place in this valley into which the storm water can be led. Proper mechanism for clarification must be ensured.
4. If any rare, endemic and threatened plant species are noticed, they shall be properly protected insitu or transplanted to a suitable site inside the lease area.

The proponent consented to set apart Rs.15 lakh per annum (recurring) for community welfare activities in consultation with the local body.

12. The proposal was placed in the 82nd meeting of SEIAA held on 15th March 2018. Authority accepted the recommendation of SEAC and decided to issue EC for a total area of 9.8760 ha subject to general conditions in addition to the specific conditions as recommended by SEAC on condition that the proponent should submit a copy of the survey report prepared in connection with the detailed enquiry into the quarrying operations in this region for verification. The proponent should set apart Rs.15 lakh per annum (recurring) for community welfare activities in consultation with the local body. The CSR amount should be included in the annual account of the company and the expenditure statement should be submitted to SEIAA along with the compliance report after getting certified by a Chartered Accountant. A notarised affidavit for the commitment of CSR activities and also agreeing all the general and specific conditions should be submitted before the issuance of EC. The proponent has submitted an affidavit vide reference 13th cited, satisfying all the above General and Specific conditions imposed by SEIAA and has also submitted copy of court order and informed that the report of Vigilance and Anti Corruption Bureau is not available and submitted a report from Village Officer Pallichal No. 4164/16 dated 5/7/2016 stating that the proposed quarry is not situated in Mukkumimala, vide ref 14th cited.

13. Environmental clearance as per the EIA notification 2006 is hereby accorded for the proposed building stone quarry project of Mr. Thomas Philip, M/Metro Aggregates & Sand India Pvt.Ltd, Edacode, Nemom Post Box No. 4013, Thiruvananthapuram in Sy Nos 70/4, 203/10, 11-2, 11-3, 11-7, 11-8, 12-1, 12-2, 12-4, 13, 14-1, 14-2, 14, 24, 204/5-1, 5-2, 5-3-1, 7-1-1, 7-1-2, 15-1, 15-2, 17, 18, 19, 22, 205/1-1, 2-1, 2, 22-1, 22-1, 265/1 pt, 265/2 pt, 265/6, 266/2 pt, 266/3 pt, 267/3, 267/3-1, 3-2, 3-3, 3-4, 3-5-2, 3-6, 268/2, 274/14,15, 23-1, 23, 24-1 and 24-2 of Pallichal Village, Neyyattinkara Taluk, Thiruvananthapuram District for an area 9.8760 Hec subject to the specific conditions as recommended by SEIAA in para 11 & 12 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.

14. 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 Mining Blasting, 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.

15. 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.

16. 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.
- 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.
 - Instances of violation if any shall be reported to the District Collector, Thiruvananthapuram to take legal action under the Environment (Protection) Act 1986.
 - The given address for correspondence with the authorised signatory of the project is Mr.Thomas Philip, M/s Metro Aggregates & Sand India Pvt.Ltd, Edacode, Nemom Post Box No- 4013, Thiruvananthapuram .

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

To,

Mr.Thomas Philip,
M/s Metro Aggregates & Sand India Pvt.Ltd,
Edacode, Nemom Post Box No- 4013,
Thiruvananthapuram

Copy to,

1. Additional Advocate General (Covering Letter)
2. MoEF Regional Office, Southern Zone, Kendriya Sadan, 4th Floor, E&F Wing, II Block, Koramangala, Bangalore-560034.
3. The Additional Chief Secretary to Government, Environment Department, Government of Kerala.
4. The Director, Mining & Geology, Thiruvananthapuram -4.
5. The Member Secretary, Kerala State Pollution Control Board
6. The District Collector, Thiruvananthapuram
7. The District Geologist, Thiruvananthapuram
8. The Tahsildhar, Neyyattinkara Taluk
9. Chairman, SEIAA.
10. Website.
11. S/f
12. 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

