



सत्यमेव जयते

Validity expires on 14/03/2023

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 of Sri. K. J. Vasudevan Nair, Managing Partner of M/s K. J. Vasudevan Nair Granites in Sy.Nos. 66/1364/4P, 66/1364/5P, 66/1364/7P and 66/1364/8P at Killannur Village, MulamkunnathuKavu Panchayath, Thrissur Taluk, Thrissur District - Granted - Orders issued.

STATE ENVIRONMENT IMPACT ASSESSMENT AUTHORITY, KERALA

No. 993/SEIAA/EC1/4862/2015

Dated, Thiruvananthapuram 15/03/2018

- Ref:
1. Application dated 24.11.2015 from Mr.K.J.Vasudevan Nair, Managing Partner of M/s K.J.Vasudevan Nair Granites, Thrissur District
 2. Minutes of the 60th meeting of SEAC held on 28th and 29th July, 2016
 3. Minutes of the 62nd meeting of SEAC, Kerala, held on 06th & 07th September, 2016.
 4. Minutes of the 76th meeting SEAC held on 25th & 26th July 2017.
 5. Minutes of the 74th SEIAA meeting held on 9/10/2017.
 6. Minutes of the 78th meeting of SEIAA held on 15th December 2017
 7. Affidavit received on 24/01/2018 & 06.02.2018 from Mr.K.J.Vasudevan Nair, Managing Partner of M/s K.J.Vasudevan Nair Granites, Thrissur

ENVIRONMENTAL CLEARANCE NO.30 /2018

Sri. K. J. Vasudevan Nair, Managing Partner, M/s K. J. Vasudevan Nair Granites, vide his application received on 24.11.2015, has sought Environmental Clearance under EIA Notification, 2006 for the quarry project in Sy. Nos. 66/1364/4P, 66/1364/5P, 66/1364/7P and 66/1364/8P at Killannur Village, Mulamkunnathu Kavu Panchayath, Thrissur Taluk, Thrissur District, Kerala for an area of 1.2671 hectares. The project comes under Category B, Activity 1(a), (i) as per the Schedule of EIA Notification 2006 (since it is below 50 hectares) and as

per O.M. No. L-11011/47/2011-IA.II(M) dated 18th May 2012 of Ministry of Environment and Forests. The project is further Categorised as Category B2 as per Notification No.S.O.141 (E) dt.15.01.2016 of Ministry of Environment and Forests, since the area of the project is below 25 hectares.

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

BASIC INFORMATION OF QUARRY
(To be filled in by the Project Proponent)

PART A

| Project details | |
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| File No. | 993/SEIAA/EC1/4862/2015 |
| Name /Title of the project | M/s K.J. Vasudevan Nair Granites - Project 3 |
| Name and address of project proponent. | M/s K.J. Vasudevan Nair Granites, Shankaranchira, Mulamkunnathu Kavu P.O., Thrissur - 680581 |
| Owner of the land | Mr. K.J. Vasudevan Nair Mrs. Subhadra Vasudevan Nair |
| Survey No. District/Taluk/ and Village etc. | Survey No.: 66/1364/4P, 66/1364/5P, 66/1364/7P and 66/1364/8P Village: Killannur Taluk: Thrissur District: Thrissur |
| Details of period of lease or permit with number including the beginning and expiry date of lease/permit period(Copy to be attached) | Quarrying Lease Order No. 587/2009-2010/437M3/2010 Beginning Date: 06.03.2010 Expiry Date: 05.03.2020 |
| Present Status of the project Date & Year of starting the work of the quarry project whether the quarry is working at present or not ? If stopped working since when? | Not yet started No NA |
| Date of submission of Application | 24.11.2015 |
| Brief description of the project. | M/s. K.J. Vasudevan Nair Granites is a partnership firm, doing mining and trading of stone (Building/ construction). Proposed Stone Quarry Project is situated at Survey No. 66/1364/4P, 66/1364/5P, 66/1364/7P and 66/1364/8P at Killannur Village, Thrissur Taluk, Thrissur District, Kerala for an extend of 1.2671 Ha |
| Details of Authorized Signatory and address for correspondence | K.J. Vasudevan Nair Kariat House, Chittilappilly P.O., Thrissur District, Kerala - 680551 Tel: 0487-2202377 Mob: 9447030563 Email: kjvgranites@gmail.com |

| Land Details | | |
|----------------|--|--|
| | Extent of area in hectares | 1.2671 Ha |
| | Is the property forest land/Govt. land/own land/patta land | Own Land |
| | Quantity of top soil/over burden produced and managed | The topsoil and over burden thickness varies from avg. 0.30 m to 0.40 m. 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. The over burden will be utilized for laying internal haul road and will form base in reclamation/ plantation. |
| | Latitude and Longitude | Latitude: 10°35'13.2300" N to 10°35'17.9654" N Longitude: 76°14'15.4630" E to 76°14'21.3321" E |
| | Topography of land and elevation | Part of the proposed land contains office infrastructure and the remaining proposed land is covered with native trees, shrubs, herbs, grass, climbers, bushes etc, which will be cleared for mining. |
| | Slope analysis | The topography of the lease area is hilly. The highest elevation of the lease area is 100 m RL and lowest is 75. Slope of the area is 20 degrees. The drainage of the lease area is towards North-West. |
| | Will there be any significant land disturbance resulting in soil erosion, subsidence & natural drainage. | The final pit slope will be kept at not steeper than 45° which is not likely to cause any problem in respect of slope stability. Thus there is no likelihood of any land slide or soil erosion at any stage in future. |
| | Access road to the site width and condition | Tarred access road is provided to the site having a width of 7 meters. |
| | Will there be any adverse impact on the aesthetics of the proposal site | Mine closure plan includes reclamation of the mined out area by filling with over-burden followed by top soil, to make it suitable for plantation. A positive impact on the surrounding environment and the aesthetics is envisaged. |
| Mining details | | |
| | Minimum and Maximum height of excavation. | Min: + 60 MSL Max: + 95 MSL |
| | Life of mine proposed. | 5 year |
| | Underground mining if any proposed | No |
| | Method of Mining | Semi- mechanized open cast mining |
| | Distance from the adjacent quarry | 7.5 meter |
| | Cluster condition if any | Yes. Total quarrying area in 500 m radial distance is 6.5451 Ha. |
| | Has "No cluster certificate" submitted? | Cluster certificate submitted |
| | Distance from nearby habitation | 125 meter |
| | Distance from nearby forest, if applicable | 12 km |

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| | | | generated from the mining activity and water from the surface/ground will not be utilized for any mining activity. Domestic sewage treated in septic tanks, will be discharged into soak pits. | |
| | | Noise | Noise will be generated from blasting & from operation of drill machine & compressor only. However, earmuffs will be provided to the workers/operators at the time of blasting & drilling operation. | |
| | | Solid Waste Management | Domestic waste (solid waste, food waste and other PVC packets) will be generated, which shall be disposed into waste bins and disposed. | |
| | | Eco-restoration | It is planned to restore most of the mined out area by thick plantation. The plantation in the mine area also includes gap filling plantation, on the safety barrier zone left around the mine area. Gap filling plantation has been carried out in the safety barrier zone left around the mine area from the beginning of the mining operations. Additional plantation will be carried out in the inactive mining area. Grass and bushes will be planted in areas prone to erosion especially at the foot of the hill. Other areas will be spread with organic manures and planted with local species. | |
| | Whether Environment Management Plan or Eco restoration Plan satisfactory? | | Yes | |

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| | Does it suggest mitigation measures for each activity | Yes |
| | If 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 | Nil |
| | Details of statutory sanction required | Nil |
| | XIII.If CRZ recommendation applicable? | No |
| PART B | | |
| Environment Impact Assessment and Mitigation Measures | | |
| Impact on water | | |
| | Details of water requirement per day in KLD | Water will be required for domestic purpose, green belt development and dust suppression. |
| | Water source/sources. | Source of water will be tanker supply/ water collected in quarry pond |
| | Expected water use per day in KLD. | 15 KLD |
| | Details of water requirements met from water harvesting. | 14 KLD from quarry pond will be used for dust suppression and green belt development |
| | What are the impact of the proposal on the ground water? | There is no significant impact on ground water as the source of water will be tanker supply/ water collected in quarry pond |
| | How much of the water requirement can be met from the recycling of treated waste water? (Facilities for liquid waste treatment) | Domestic sewage treated in septic tanks, will be discharged into soak pits. |
| | What is the incremental pollution load from waste water generated from the proposed activities? | There will be no contamination to water as no effluent will be generated from the mining activity. |
| | How is the storm water from within the site managed? | Garland drains will be provided around the mining boundary to arrest silt wash off during rains. The storm water drain will be connected with a settling tank. Gully checks/check bunds and retention walls will be constructed at strategic locations to arrest silt wash off. |
| Impact on Biodiversity and Eco restoration Programmes | | |
| | Will the project involve extensive clearing or modification of vegetation (Provide details) | During operational phase, plant species existing in site will be cleared from mine site and same will be planted during the process of afforestation. |
| | What are the measures proposed to minimize the likely impact on vegetation (details of proposal for tree | It is planned to restore most of the mined out area by thick plantation. The plantation in the mine area also includes gap filling plantation on the safety barrier zone left around the mine area. Gap filling plantation |

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| | plantation/ landscaping) | has been carried out in the safety barrier zone left around the mine area from the beginning of the mining operations. Additional plantation will be carried out in the inactive mining area. Grass and bushes will be planted in areas prone to erosion especially at the foot of the hill. Other areas will be spread with organic manures and planted with local species. |
| | 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) | Nil |
| Impact on Air Environment | | |
| | What are the mitigation measures on generation of dust, smoke and air quality | <ul style="list-style-type: none"> • Practice of wet drilling / provision of dust arrestors in drills to control dust generation during drilling. • Proper blast design and avoiding overcharging of blast holes. • Controlled blasting techniques will be adopted. • Laying of haul road as per the standards • Periodic water sprinkling on haul road. • Provision of dust mask to workers working at highly dust prone and affected areas. • Provision of green belt all along the periphery of the applied area. • Transport of mineral in trucks covered with tarpaulin. |
| | Details of internal traffic management of the site. | <ul style="list-style-type: none"> • Prohibiting overloading and over-speeding of mineral transportation vehicles. • Periodic maintenance of mine machinery and transportation vehicles. • Tarred Access road is provided to the site having a width of 7 meters. |
| | Details of noise from traffic, machines and vibrator and mitigation measures | <p>The major noise generating source from the mining activity is working machinery, drilling, blasting, loading, unloading and plying of vehicles. The following control measures will be undertaken to bring down the noise levels within the permissible limit:-</p> <ul style="list-style-type: none"> • Development of thick green belt around mining area • Periodic maintenance of machinery, equipments. • Provision of earplugs to workers exposed to high noise areas. • Conducting periodical medical check up of all workers for any noise related health problems. |

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| | | <ul style="list-style-type: none"> • Proper training to personnel to create awareness about adverse noise level effects. • Periodic noise monitoring at suitable locations in the mining area and nearby habitations to assess efficacy of adopted control measures. |
| | Impact of DG sets and other equipments on noise and vibration and ambient air quality around the project site and mitigation measures | <ul style="list-style-type: none"> • Periodic maintenance of machinery, equipments. • Provision of earplugs to workers exposed to high noise areas. |
| | Air quality monitoring in detail | Ambient air quality at the boundary of mine and at the near habitations will be carried out once in 3 months. Parameters like PM ₁₀ , PM _{2.5} , SO ₂ , NO _x will be monitored. |
| Energy Conservation | | |
| | Details of power requirement and source of supply. | No electricity will be required as mining will be carried out during daytime by opencast semi-mechanized method. Minimal power required for office shall be taken from the general electric supply of the area. |
| | Details of renewable energy (non – conventional) used. | Nil |
| Risk Management | | |
| | Are there sufficient measures proposed for risk hazards in case of emergency such as accident at the site? | Open cast mining method is adopted in this mine. If the benches are made with proposed height and width no risk will be there. Even then if any miner or major accident happens, the mines staffs having First aid facilities with first aid box with all the necessary medicines & stretchers etc to give the first aid treatment at the side and will arrange immediately the vehicle to reach the nearest hospital. If any disaster happens the lessee is capable to meet such eventualities. At the time of any accident during mining activity proposal of first aid facility at mines site and one vehicle at mines side. Distance of nearby hospital is 5.3 Km from site. |
| | Are proposals for fencing around the quarry satisfactory? Storage of explosives/hazardous substance in detail Facility for solid waste management | <p>Yes</p> <p>No hazardous waste will be generated.</p> <p>Domestic waste (solid waste, food waste and other PVC packets) will be generated, which shall be disposed into waste bins and disposed.</p> |
| Socio Economic Impacts | | |
| | Will the project cause adverse effects on local community, disturbance to sacred sites or other cultural values. What are the safe guards proposed? | The project will cause no adverse effects on local community, disturbance to sacred sites or other cultural values. |

| | Will the proposal result in any changes to the demographic structure of local population. If so, provide details. | No | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| | Are the CSR proposals satisfactory. Give details | <table> <tr> <th colspan="3">Common CSR Activities already carried out</th></tr> <tr> <th>Sl.No.</th><th>Particulars</th><th>Amount in Rs.</th></tr> <tr> <td>1</td><td>Kits supply to surrounding local inhabitants during Festivals like Onam, Christmas and Eid (10 Families),</td><td>10,000</td></tr> <tr> <td>2</td><td>Fund for various functions like marriage in financially backward families at Mulamkunnathu Kavu Region (10 families)</td><td>1,00,000</td></tr> <tr> <td>3</td><td>Annual Fund for welfare of inmates at Jeevandhara Orphanage, Alathur</td><td>20,000</td></tr> <tr> <td>4</td><td>Free material supply for road renovation in Mulamkunnathu Kavu Region (Quarterly)</td><td>3,50,000</td></tr> <tr> <td>5</td><td>Fund for maintenance of places of worship in Killannur Village (3 No.s)</td><td>75,000</td></tr> <tr> <td>6</td><td>Construction of Toilets for 5 families at Mulamkunnathu Kavu Panchayat</td><td>75,000</td></tr> <tr> <td>7</td><td>Financial assistance for patients of financially backward families at Mulamkunnathu Kavu Region (10 families)</td><td>75,000</td></tr> <tr> <td>8</td><td>Drinking water supply at Mulamkunnathu Kavu region during summer season (3000 Litre/ Day)</td><td>75,000</td></tr> <tr> <td>9</td><td>Food supply in Medical College Hospital, Athani 2 times a year</td><td>20,000</td></tr> <tr> <td>10</td><td>Uniforms and study</td><td>25,000</td></tr> </table> | Common CSR Activities already carried out | | | Sl.No. | Particulars | Amount in Rs. | 1 | Kits supply to surrounding local inhabitants during Festivals like Onam, Christmas and Eid (10 Families), | 10,000 | 2 | Fund for various functions like marriage in financially backward families at Mulamkunnathu Kavu Region (10 families) | 1,00,000 | 3 | Annual Fund for welfare of inmates at Jeevandhara Orphanage, Alathur | 20,000 | 4 | Free material supply for road renovation in Mulamkunnathu Kavu Region (Quarterly) | 3,50,000 | 5 | Fund for maintenance of places of worship in Killannur Village (3 No.s) | 75,000 | 6 | Construction of Toilets for 5 families at Mulamkunnathu Kavu Panchayat | 75,000 | 7 | Financial assistance for patients of financially backward families at Mulamkunnathu Kavu Region (10 families) | 75,000 | 8 | Drinking water supply at Mulamkunnathu Kavu region during summer season (3000 Litre/ Day) | 75,000 | 9 | Food supply in Medical College Hospital, Athani 2 times a year | 20,000 | 10 | Uniforms and study | 25,000 |
| Common CSR Activities already carried out | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sl.No. | Particulars | Amount in Rs. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Kits supply to surrounding local inhabitants during Festivals like Onam, Christmas and Eid (10 Families), | 10,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | Fund for various functions like marriage in financially backward families at Mulamkunnathu Kavu Region (10 families) | 1,00,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | Annual Fund for welfare of inmates at Jeevandhara Orphanage, Alathur | 20,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | Free material supply for road renovation in Mulamkunnathu Kavu Region (Quarterly) | 3,50,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | Fund for maintenance of places of worship in Killannur Village (3 No.s) | 75,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | Construction of Toilets for 5 families at Mulamkunnathu Kavu Panchayat | 75,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | Financial assistance for patients of financially backward families at Mulamkunnathu Kavu Region (10 families) | 75,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | Drinking water supply at Mulamkunnathu Kavu region during summer season (3000 Litre/ Day) | 75,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | Food supply in Medical College Hospital, Athani 2 times a year | 20,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | Uniforms and study | 25,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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| | | materials distribution school children (50 No.) at St. Thomas Higher Secondary School, Tirur | |
| | | 11 Sports equipments supply for St. Thomas Higher Secondary School, Tirur | 10,000 |
| | | 12 Recreational materials supply for anganawadi at Thadaparambu | 20,000 |
| | | Grand Total | 8,55,000 |
| | | In addition to the above CSR activities, as part of Access and Benefit Share (ABS), 1 percent of annual profit of the company will be given to Biodiversity Management Committee of the Mulamkunnathu Kayu Grama Panchayat towards the restoration of biodiversity loss due to quarrying activities. | |
| | What are the projects benefits in terms of employment potential? | Project will create direct & indirect employment opportunities within the surrounding region. A total of 30 people will be employed in this mine. Unit will use good faith efforts to employ local people from the nearby villages depending upon the availability of skilled & un-skilled man-power surrounding the project site. | |
| PART C | | | |
| | Details of NABET approved EIA Consultant engaged-Their name, address and accreditation details | M/s Mantec Consultants Pvt Ltd D-36, Sec-6 Noida-201301(U.P) Registered Address 805, Vishal Bhawan, 95, Nehru Place, New Delhi – 110019 Accredited from QCI/NABET (Accreditation No. NABET/EIA/RAO23/024) | |
| Summary and Conclusion | | | |
| | Overall justification for implementation of the project. | The major need of building stone is due to its high compressive strength and durability (among the hardest, dimensional & structural stones) it can effectively withstand the vagaries of nature. Fine-grained granite is employed for ornamental and monumental work as well as for inscription purposes. The mineral-rich colors, and the hardness & density, makes it useful for many applications. Polished slabs and tiles are used in countertops, flooring, retaining walls and landscaping around a center fountain/ pond, staircase and many other design elements (residential and commercial | |

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| | | <p>applications). It is also known as the maintenance-free stone. The proposed mining project will fulfill its uses in buildings and construction, bridges, paving, monuments and many other exterior projects. The mining and associated activities in the mineral bearing areas bring about gains in gross domestic product, i.e. there is though a minor contribution by the proposed project but will add to the gains in G.D.P. (Gross Domestic Product).</p> <p>A total of 25 people are employed in this mine. It will create employment (though marginally) for local population.</p> <p>The project proponent will pay royalty for the mineral produced from the mine, direct and indirect taxes will be paid thereby contributing to the regional revenue. The public revenue will further be put for infrastructural development and other sectors like health, education and social welfare.</p> |
| | <p>Explanation of how adverse impacts have been mitigated.</p> | <p>Operations in the quarry such as drilling, blasting, loading and transport of material will do generate dust, noise and etc. The management of various environmental attributes is very essential and plays an important role. Management measures for mitigating these are mainly dust suppression by water spraying on haul roads, covering of material carrying trucks.</p> <p>The noise is the environment attribute associated with the quarrying activity and operation of heavy machinery. The quarrying operation will be restricted to only day time, to attenuate noise various measures shall be taken up from the source point. The activity such as drilling shall be updated to latest technology which involves wet drilling technology, and blasting will be carried out with controlled mechanism.</p> <p>There will be no contamination to water as no effluent will be generated from the mining activity and water from the surface/ground will not be utilized for any mining activity. Domestic sewage treated in septic tanks, will be discharged into soak pits.</p> |

2. The matter was considered in the 60th meeting of SEAC held on 28th and 29th July, 2016 and deferred for presentation.
3. Accordingly, the proposal was placed in the 62nd meeting of SEAC, Kerala, held on 06th & 07th September, 2016. The Committee appraised the proposal based on the mining plan, pre-feasibility report and all other documents submitted along with the

Form I application. The committee decided to defer the item and the proponent was asked to submit the following additional documents.

1. Since the site is reported to be within 10kms of Peechi-Vazhani Wildlife Sanctuary proof of application preferred for wildlife clearance.
2. Since the proponent is already operating another quarry in the adjoining lease area a composite mine plan for the whole area has to be produced for more scientific and environmental friendly mining.

Subsequently, the proponent has submitted the clarifications/documents sought in the 62nd meeting of SEAC held on 06th & 07th September, 2016.

4. The proposal was placed in the 72nd meeting of SEAC held on 08th & 09th May 2017. The Committee verified the additional documents submitted by the proponent and deferred the item for field visit.

Field visit to the above project site was carried out by the sub-committee of SEAC comprising of Er.P.Sreekumaran Nair & Dr.K.G.Padmakumar. The report is as follows;

The proposed site falls within 10°35'13.2300" N to 10°35'17.9654" N lat. and 76°14'15.4630" E to 76°14'21.3321" E Long. and in Sy. Nos. 66/1364/4P, 66/1364/5P, 66/1364/7P and 66/1364/8P at Killannur Village, MulamkunnathuKavuPanchayath, Thrissur Taluk, Thrissur District. The land is private own land, a rubber plantation having lease area 1.2671 hectares. The project is for quarrying of 38,160 TPA of building stone. A stone crusher unit is also in operation. This is a working quarry cum crusher unit.

The proposed land does not fall under any eco sensitive regions, wetlands, water courses or other water bodies, coastal zone, biospheres, mountains, or forests. The nearest water course is Shankarchira Canal located 0.35 km, NW. Poomala Dam is located 1.45 km, NE. Vazhani wild life Sanctuary is at 24.31km away km, on SE. The proponent has submitted clarification documents as called for viz., 1) wild life clearances as it is reported to be located within 10kms of Peechi-Vazhani Wildlife Sanctuary and 2) a composite mining plan for the whole area as the proponent is already operating another quarry in the adjoining lease area, as per records.

Nearest house is at 125 m and no forest is located nearby. The approach road is paved and maintained well. A tri-compartmented cement settling tank and the connected kutchha clarification pond is in place and the water is recycled internally and not allowed to flow out.

The office and premises are maintained well. However, the dust suppression mechanism for the crusher unit need to be improved. The proponent shall be asked to ensure optimum air quality, fix dust curtains for the crusher unit or devise in situ dust suppression facilities for the crusher unit.

5. The proposal was considered in the 76th meeting SEAC held on 25th & 26th July 2017. The Committee appraised the proposal based on Form I, Pre-feasibility Report, Mining Plan, field inspection report of the Sub Committee and all other documents

submitted with the proposal. The Committee decided to Recommend for issuance of EC subject to general conditions in addition to the following specific condition for mining.

- 1. Dust suppression arrangement need to be improved and should be carried out immediately.*
- 2. 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.*

SEIAA may also obtain an appropriate commitment from the proponent towards CSR activities.

6. The proposal was placed before 74th SEIAA meeting held on 9/10/2017. Authority noticed that in the basic details submitted by the proponent it is stated that the quarry is not yet started. But in the field inspection report the subcommittee members stated that this is a working quarry cum crusher unit. Hence Authority decided that the proposal can be considered only after getting an explanation from the proponent regarding the suppression of facts. The proponent has submitted clarifications sought by the Authority vide letter dated 14/11/2017.
7. The proposal was considered in the 78th meeting of SEIAA held on 15th December 2017. Authority accepted the explanation submitted by the proponent and decided to issue EC subject to general condition in addition to the following specific conditions.
 - 1. Dust suppression arrangement need to be improved and should be carried out immediately.*
 - 2. 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 should set apart Rs. 5 lakh per annum (recurring) for CSR activities for the welfare of the local community 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. EC will be issued only after fulfilling all the pre-mining condition in the project site. 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 the affidavit vide reference 7th cited, satisfying all the above general & specific conditions imposed by SEIAA.

8. Environmental clearance as per the EIA notification 2006 is hereby accorded for the proposed stone quarry project of Mr. Sri. K. J. Vasudevan Nair, Managing Partner, M/s K. J. Vasudevan Nair Granites, Thrissur Taluk, Thrissur District, for the quarry project in survey Nos. 66/1364/4P, 66/1364/5P, 66/1364/7P and 66/1364/8P at Killannur Village, Mulamkunnathu Kavu Panchayath, Thrissur Taluk, Thrissur District, Kerala for an area of 1.2671 hectares. subject to the specific conditions as recommended by SEIAA in para 7 above, all the environmental impact mitigation and management measures undertaken by the project proponent in the Form I, EMP, PFR and Mining plan submitted to SEIAA. The assurances and clarifications given by the proponent will be deemed to be a part of these proceedings as if incorporated herein. Also the general conditions for projects stipulated for mining (items 1 to 61), appended hereto will be applicable and have to be strictly adhered to.
9. The clearance issued will also be subject to full and effective implementation of all the undertakings given in the application form, mitigation measures as assured in the Environment Management Plan and the mining features including progressive mine closure plan as submitted with the application and relied on for grant of this clearance. The above undertakings and the conditions and the undertakings in Chapter3(Mining),Chapter3c(Blasting),Chapter6(EMP)Progressive Mine Closure Plan of the Mining Plan as submitted will be deemed to be part of this proceedings as conditions as undertaken by the proponent, as if incorporated herein.
10. Validity of the Environmental Clearance will be five years from the date of this clearance, subject to inspection by SEIAA on annual basis and compliance of the conditions, subject to earlier review of E.C in case of violation or non-compliance of conditions or genuine complaints from residents within the security area of the quarry.
11. Compliance of the conditions herein will be monitored by the State Environment Impact Assessment Authority or its authorised offices and also by the regional office of the Ministry of Environment & Forests, Govt. of India, Bangalore.
- i. Necessary assistance for entry and inspection should be provided by the project proponent and those who are engaged or entrusted by him to the staff for inspection or monitoring.
- ii. Instances of violation if any shall be reported to the District Collector, Thrissur, to take legal action under the Environment (Protection) Act 1986.

- iii. The given address for correspondence with the authorised signatory of the project is
Mr.K.J.Vasudevan Nair, Managing Partner, M/s.K.J.Vasudevan Nair Granites,
Kariat House, Chittilappilly (PO), Thrissur District- 680 551

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

To,

Mr.K.J.Vasudevan Nair,
Managing Partner,
M/s.K.J.Vasudevan Nair Granites,
Kariat House,
Chittilappilly (PO),
Thrissur District- 680 551

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, Thiruvananthapuram
5. The District Collector, Thrissur
6. The District Geologist, Thrissur
7. The Tahsildhar, Thrissur Taluk.
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 proponent shall apply and get the approval of this Authority.
33. The Authority reserves the right to add additional safeguard measures subsequently, if found necessary, and to take action including revoking of the environment clearance under the provisions of the Environment (Protection) Act, 1986, to ensure effective implementation of the suggested safeguard measures in a time bound and satisfactory manner.
34. The stipulations by Statutory Authorities under different Acts and Notifications should be complied with, including the provisions of Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and control of Pollution) act 1981, the Environment (Protection) Act, 1986, the Public Liability (Insurance) Act, 1991 and EIA Notification, 2006.
35. The project proponent should advertise in at least two local newspapers widely circulated in the region, one of which (both the advertisement and the newspaper) shall be in the vernacular language informing that the project has been accorded Environmental Clearance and copies of clearance letters are available with the State Environment Impact Assessment Authority (SEIAA) office and may also be seen on the website of the Authority at www.seiaakerala.org. The advertisement should be made within 10 days from the date of receipt of the Clearance letter and a copy of the same signed in all pages should be forwarded to the office of this Authority as confirmation.
36. A copy of the clearance letter shall be sent by the proponent to concerned Grama Panchayat/ District Panchayat/ Municipality/ Corporation/ Urban Local Body and also to the Local NGO, if any, from whom suggestions / representations, if any, were received while processing the proposal. The Environmental Clearance shall also be put on the website of the company by the proponent.
37. The proponent shall submit half yearly reports on the status of compliance of the stipulated EC conditions including results of monitored data (both in hard copies as well as by e-mail) and upload the status of compliance of the stipulated EC conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the respective Regional Office of MoEF, Govt. of India and also to the State Environment Impact Assessment Authority (SEIAA) office.
38. The details of Environmental Clearance should be prominently displayed in a metallic board of 3 ft x 3 ft with green background and yellow letters of Times New Roman font of size of not less than 40. Sign board with extent of lease area and boundaries shall be depicted at the entrance of the quarry, visible to the public
39. The proponent should provide notarized affidavit (indicating the number and date of Environmental Clearance proceedings) that all the conditions stipulated in the EC shall be scrupulously followed.
40. No change in mining technology and scope of working should be made without prior approval of the SEIAA. No further expansion or modifications in the mine shall be carried out without prior approval of the SEIAA, as applicable.
41. The Project proponent shall ensure that no natural water course and/or water resources shall be obstructed due to any mining operations. Necessary safeguard measures to protect the first order streams, if any, originating from the mine lease shall be taken.
42. Monitoring of Ambient Air Quality to be carried out based on the Notification 2009, as amended from time to time by the Central Pollution Control Board. Water sprinkling should be increased at places loading and unloading points & transfer point to reduce fugitive emissions.
43. The top soil, if any, shall temporarily be stored at earmarked site(s) only for the topsoil shall be used for land reclamation and plantation. The over burden (OB) generated during the mining operations shall be stacked at earmarked dump site(s) only. The maximum height of the dumps shall not exceed 8m and width 20m and overall slope of the dumps shall be maintained to 45°. The OB dumps should be scientifically vegetated with suitable native species to prevent erosion and surface run off. In critical areas, use of geo textiles shall be undertaken for stabilization of the dump. The entire excavated area shall be backfilled. Monitoring and management of rehabilitated areas should continue until the vegetation becomes self-sustaining.

44. Catch drains and siltation ponds of appropriate size shall be constructed around the mine working, mineral and OB dumps to prevent run off of water and flow of sediments directly into the river and other water bodies. The water so collected should be utilized for watering the mine area, roads, green belt development etc. The drains shall be regularly desilted particularly after monsoon and maintained properly.
45. Effective safeguard measures such as regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of 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 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