



सत्यमेव जयते

***Proceedings of the State Environment Impact Assessment Authority
Kerala***

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

Sub: SEIAA- Environmental Clearance for the proposed building stone quarry project in Survey Nos. 1361/1 and 1361/2 at Killannur Village, Thrissur Taluk, Thrissur District, Kerala by Sri. K.J. Vasudevan Nair, Managing Partner, M/s K. J. Vasudevan Nair Granites, Killannur Village, Mulamkunnathu Kavu, P.O., Thrissur -Granted- Orders issued.

STATE ENVIRONMENTAL IMPACT ASSESSMENT AUTHORITY

No. 822/SEIAA/EC1/2557/2015

dated, Thiruvananthapuram 01-03-2016

- Read:-
1. Application dated 01.07.2015 submitted by Sri. K.J. Vasudevan Nair, Managing Partner, M/s K. J. Vasudevan Nair Granites, Killannur Village, Mulamkunnathu Kavu, P.O., Thrissur - 680581
 2. Minutes of the 50th meeting of SEAC held on 30/31-12-2015.
 3. Minutes of the 49th meeting of SEIAA held on 05-12-2016.

Environmental Clearance No. 35 /2016.

Sri. K.J. Vasudevan Nair, Managing Partner, M/s K. J. Vasudevan Nair Granites, Killannur Village, Mulamkunnathu Kavu, P.O., Thrissur – 680581 vide his application received on 03/07/2015 has sought Environmental Clearance under EIA Notification, 2006 for the quarry project in Sy. Nos. 1361/1 and 1361/2 at Killannur Village, Thrissur Taluk, Thrissur District for an area of 2.3720 hectares. The project comes under Category B, Activity 1(a), (i) as per the Schedule of EIA Notification 2006 (since it is below 50 hectares) and as per O.M. No. L-11011/47/2011-IA.II (M) dated 18th May 2012 of Ministry of Environment and Forests. It is further categorized as Category B2 as per the O.M. No. J-13012/12/2013-IA-II (I) dtd. 24.12.2013 of Ministry of Environment and Forests, since the area of the project is below 25 hectares. Other details of the proposal are as follows



2. BASIC INFORMATION OF THE PROJECT

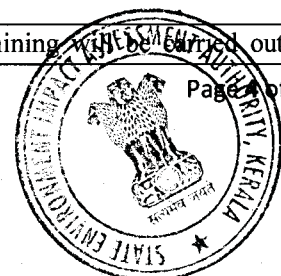
Name of the Project	Quarry project of M/s K.J. Vasudevan Nair Granites- Project 2
Survey Numbers	Survey Nos. 1361/1 and 1361/2.
Village	Killannur Village
Tehsil	Thrissur Taluk
District	Thrissur District
Extent of land in hectares	2.37.20 Ha
Is the property forest land/Govt. land/ own land	Government Puramboke Land
Latitude	10035'15.37" N to 10035'19.56" N
Longitude	76014'11.92" E to 76014'12.15" E
Cluster condition (if any)	There are 6 other quarries of the proponent (Sri. K. J. Vasudevan Nair) are in operation within 500m radius. But the total area is below 25 ha.
Proposed production capacity	79,000 MTA
Expected life of mine	About 4.5 Years
Total Project cost	Rs. 1,46,06,300/-
Interlinked project (if any)	No
Whether CRZ is applicable	Not applicable
Status of litigation/complaint/cases	No
Permanent or temporary change on land use, land cover or topography	<ul style="list-style-type: none"> Land use, presently hillock, devoid of vegetation, will be changed during proposed mining. At the end of mining period, the same will be reclaimed for plantation. Top soil and over-burden will be scrapped off. However, at the end of mining period, the over-burden and top soil will be filled over the mined area make it suitable for plantation.
Topography of land and elevation	<ul style="list-style-type: none"> Topography of the area will undergo significant change due to extraction of stone. The highest elevation of the lease area is 90 m. MSL and lowest is 60 m MSL. As the proposed area is hill rock, the drainage of the lease area is towards SW.
Details of method of working with phasing of activities, height, width of benches.	<ul style="list-style-type: none"> The quarry will working in the conventional open cast semi-mechanized mine Bench Height- 5.0 m Bench width- 6.0 m.
Vegetation	<ul style="list-style-type: none"> Part of the proposed area is already under mining and is devoid of vegetation. However, a small part of the area is covered with sparse vegetation, which will be cleared for mining.
Change in water bodies due to mining activities	<ul style="list-style-type: none"> No
Proneness to natural hazards	<ul style="list-style-type: none"> As per BMTPC, Vulnerability Atlas Seismic Zone of India IS: 1893-2002, the proposed area comes under Zone-III, moderate damage risk zone. The proponent stated that the project area is not prone to earthquake, landslide and flooding. There are no incidents of cloudburst and landslide reported so far.



Environmental parameters considered	
WATER	
Water (expected use and sources in KLD)	<ul style="list-style-type: none"> Total water requirement is 15 KLD (comprising 1 KLD for domestic use, 2 for plantation and 12 for dust suppression), which will be sourced from tanker water supply on contract basis.
Sources of generation and facilities for liquid waste treatment	<ul style="list-style-type: none"> The sewage generated from the rest-room is treated in septic tank, followed by disposal in soak pits.
Water quality meeting requirements	<ul style="list-style-type: none"> Water quality to meet requirements after the treatment of water (filtration, disinfection & sedimentation).
Water Regime	<ul style="list-style-type: none"> Pond & wells
LAND	
Access road to the site – Width & Condition	<ul style="list-style-type: none"> Access road is provided to the site having a width of 7 meters
Storage of explosives /hazardous substances	<ul style="list-style-type: none"> Explosives will be stored in duly licensed magazine and transported in explosive van. Explosives will be handled and used by authorized persons certified under “MMR 1961”.
Hazardous waste management	<ul style="list-style-type: none"> Explosives used for controlled blasting to loosen the deposit will be stored in a 250 Kg Magazine. All control measures as per MMR 1961 are followed for storage, handling and controlled blasting of the explosive.
Facility for solid waste management	<ul style="list-style-type: none"> Domestic waste (solid waste, food waste and other PVC packets) will be generated, which shall be disposed into waste bins and disposed. The overburden is proposed to be stacked in the dump area specially provided for the purpose. These dump yards have been protected by toe walls. The toe walls will be constructed during first year period. The height of these dumps will also be restricted and benched. A retaining wall 0.5 m x 1.0 m will be made on the low altitude side of the dump. Overburden will be utilized for reclamation of mined out areas and for laying of haul roads.
Top soil, overburden etc.	<ul style="list-style-type: none"> The lease area is devoid of top soil cover. 2650.41 m³ of overburden will be generated in five years during mining activity and will be used for backfilling the excavated pits and for plantation purpose.
Proximity to forest lands	<ul style="list-style-type: none"> There is no forest land within 6.35 km radius of project site.
Proneness of the area for landslides	<ul style="list-style-type: none"> 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 at any stage in future.
Significant land disturbance resulting in erosion, subsidence & instability	<ul style="list-style-type: none"> 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 at any stage in future.



NOISE	
Sources of noise pollution control measures	<ul style="list-style-type: none"> The Rock Breaker, Compressor, Jack hammer and Tippers/Trucks will generate noise. However, the noise level will be within the permissible limits which will not cause harm. The machinery will be maintained properly to reduce noise and vibration. Drilling and blasting will generate noise and vibration. These will be minimized by controlled blasting in sequence with time gap. Transportation of mined material will generate noise, which will be controlled through use of efficient silencers.
Noise level monitoring	<ul style="list-style-type: none"> Due to semi-mechanized extraction and loading-unloading of material, noise will be generated temporarily. 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.
AIR	
Air quality meeting requirements	<ul style="list-style-type: none"> Mining operation is of small scale so air pollution due to dust will be negligible. Wet drilling has been proposed to minimize the dust. Water sprinklers were proposed on haul road once in a day especially during dry seasons. Ambient air quality standards will be maintained. Drill machines shall be equipped with dust collectors. Use of appropriate Explosives for blasting and avoiding over charging of blast holes. Controlled blasting techniques shall be adopted. Provision of dust filters/Mask to workers working at the dust prone and affected areas. Provision of greenbelt all along the periphery of the lease area. Periodical monitoring of ambient air quality in and around the lease area.
Likely emissions affecting environment	<ul style="list-style-type: none"> Dust and fugitive emissions will be generated during activities such as blasting, screening, loading and transportation of minerals. Fuel gas emissions from vehicles are anticipated during transportation of mined out material.
By deposition of pollutants emitted to air into the land or into water	<ul style="list-style-type: none"> Dust generated during mining and movement of trucks on haul roads will be controlled by regular water sprinkling, controlling speed of dumpers / trucks on haul roads and developing thick green belt around the Mining lease area. Trees will also be planted along the haul roads.
ENERGY	
Energy requirement	<ul style="list-style-type: none"> 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.	
	<ul style="list-style-type: none">HSD fuel (approx. 200 KLD) is required for operating back hoe, rock breaker, jack hammer and DG Set.	
BIODIVERSITY		
Presence of any endangered species or red listed category	<ul style="list-style-type: none">There is no endangered, endemic or scheduled flora and fauna species existing at proposed mine lease area.There is no schedule I species of animals observed within study area as per Wildlife Protection Act 1972 as well as no species is in vulnerable, endangered or threatened category as per IUCN.	
Loss of native species and genetic diversity	<ul style="list-style-type: none">Most of the lease area is devoid of vegetation. However, at some places, shrubs and bushes can be seen.During operational phase, plant species will be cleared from mine site and same will be planted during the process of afforestation.	
Eco restoration programmes	<ul style="list-style-type: none">At the end of the life of the mine, the mined out pit will be converted into water reservoir, and greenbelt will be developed over the upper benches and in the 7.5 m wide buffer area on the periphery.	
Areas which are important or sensitive for ecological reasons – Wetlands, watercourses or other water bodies, coastal zone, biospheres, mountains, forests	Lake	Shobha City Lake, 7.1 km, SW
	Reservoir	Vazhani Dam Reservoir, 24.34 km, NE.
	Forest	Vazhani Wildlife Sanctuary, 24.34 km, NE
SOCIAL ASPECTS		
CSR related to the project	<p>In the following sectors:</p> <ol style="list-style-type: none">EducationPublic HealthInfrastructure Development. <p>A detailed study on social status of the project site surroundings & need base study on proposed CSR activities were carried out. The summary of the report is provided in the PFR. A total of Rs. 8,30,000/- will be spent towards various CSR activities.</p>	
GENERAL		
Details of Authorised Signatory & Address for correspondence)	Shri . K.J. Vasudevan Nair Kariat House, Chittilappilly P.O., Thrissur District, Kerala – 680551.	
Details of NABET approved EIA consultant Organisation	M/s Mantec Consultants Pvt. Ltd., D-36, Sector - 6, Noida - 201301 <u>Registered Address</u> 805, Vishal Bhawan, 95, Nehru Place, New Delhi - 110019	



3. The proposal was considered by SEAC in its 50th meeting held on 30/31-12-2015. The authorised person on behalf of the proponent informed that the project is working with lease, which is valid up to 2020. The proposed area is 2.3720 Ha and is Govt. purambokku land and the proponent has provided copies of the lease along with the application. The annual production of the project is 79,000 MTA of building stone and the life of mine is 4.5 years. The land use pre-dominates rubber cultivation. The Committee observed that Chimmony Irrigation Canal is flowing in the western side of the proposed area and safe distance should be maintained.

The Committee appraised the proposal based on the Mining Plan, Prefeasibility Report and all other documents submitted along with the Form I application and decided to recommend for issuance of Environmental Clearance with the following specific condition, in addition to the general conditions stipulated for mining projects.

1. A minimum setback distance of 100 m should be kept from the Chimmony Irrigation Canal.

4. The proposal was considered by SEIAA in its 49th meeting held on 05-02-2016. The Authority found that the project is working with lease, which is valid up to 2020. The proposed area is 2.3720 Ha and is Govt. purambokku land and the proponent has provided copies of the lease along with the application. The land use pre-dominates rubber cultivation. Chimmony Irrigation Canal is flowing in the western side of the proposed area and safe distance should be maintained.

Authority decided that EC may be issued to the quarry as per the recommendations of SEAC, provided NOC either from the District Collector or the R.D.O Thrissur is produced. The grant of E.C is also subject to production of no cluster certificate and general conditions stipulated for mining projects and the mitigation measures undertaken in the EMP in the PFR. However if any genuine complaints about the quarry is received, E. C issued shall be reviewed.

5. Validity may be five years 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. Environmental Clearance is therefore granted to the quarry project of Sri. Sri. K.J. Vasudevan Nair, Managing Partner, M/s K. J. Vasudevan Nair Granites, Killannur Village, Mulamkunnathu Kavu, P.O., Thrissur District, Kerala subject to the general conditions annexed hereto.

6. 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 undertakings in chapter 4 of Mining plan (Mining), Chapter 11 (EMP) of the Mining Plan, Chapter 5 of Mining plan (Blasting), Chapter 1.4.6 of PFR (Disaster Management), and the entire Progressive Mine Closure Plan as submitted will be deemed to be part of these proceedings as conditions as undertaken by the proponent, as if incorporated herein.

7. Compliance of the conditions herein will be monitored by the Directorate of Environment and Climate Change or its agencies 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.

8. The given address for correspondence with the authorised signatory of the project is Sri. K.J. Vasudevan Nair, Managing Partner, M/s K. J. Vasudevan Nair Granites, Killannur Village, Mulamkunnathu Kavu, P.O., Thrissur – 680581.

Sd/
P. Mara Pandiyan., I.A.S
Member Secretary (SEIAA)
&
Additional Chief Secretary to Government
Environment & Forest Department
Government of Kerala.

To,
Sri. K.J. Vasudevan Nair,
Managing Partner,
M/s K. J. Vasudevan Nair Granites,
Killannur Village, Mulamkunnathu Kavu, P.O.,
Thrissur – 680581

Copy to:

1. MoEF Regional Office, Southern Zone, Kendriya Sadan, 4th Floor, E& F Wing, II block, Koramangala, Bangalore-560034.
2. Principal Secretary to Government, Environment Department.
3. The District Collector, Thrissur.
4. The Director, Department of Environment & Climate Change.
5. The Director, Mining and Geology Department, Kesavadasapuram, Thiruvananthapuram-4
6. The Secretary, Mulamkunnathukavu Grama Panchayath, Thrissur-680581
7. Chairman, SEIAA
8. E.C File
- ✓ 9. Stock File
10. O/C.

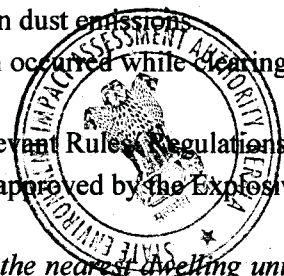


Forwarded/ By order

Administrator
SEIAA

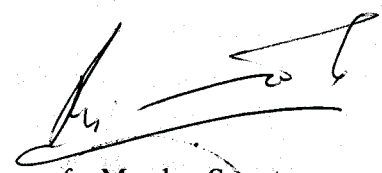
STATE ENVIRONMENT IMPACT ASSESSMENT AUTHORITY KERALA
GENERAL CONDITIONS (for mining projects)

- (i) Rain Water Harvesting facility should be installed as per the prevailing provisions of KMBR / KPBR, unless otherwise specified.
- (ii) Environment Monitoring Cell as agreed under the affidavit filed by the proponent should be formed and made functional.
- (iii) 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.
- (iv) Maximum possible solar energy generation and utilization shall be ensured as an essential part of the project. .
- (v) Sprinklers shall be installed and used in the project site to contain dust emissions.
- (vi) Eco-restoration including the mine closure plan shall be done at the own cost of the project proponent.
- (vii) 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 dumpings and overburden and planted with indigenous plant species that are eco-friendly.
- (viii) Corporate Social Responsibility (CSR) agreed upon by the proponent should be implemented
- (ix) *The lease area shall be fenced off with barbed wires to a minimum height of 4ft around, before starting of mine.*
- (x) Warning alarms indicating the time of blasting (to be done at specific timings) has to be arranged as per stipulations of Explosive Department.
- (xi) Control measures on noise and vibration prescribed by KSPCB should be implemented.
- (xii) Quarrying activities should be limited to day time as per KSPCB guidelines.
- (xiii) Blasting should be done in a controlled manner as specified by the regulations of Explosives Department or any other concerned agency.
- (xiv) A licensed person should supervise/ control the blasting operations.
- (xv) Access roads to the quarry shall be tarred to contain dust emissions that may arise during transportation of materials.
- (xvi) Overburden materials should be managed within the site and the old quarries, if any, should be reclaimed and restored.
- (xvii) Height of benches should not exceed 5m and width should not be less than 5m.
- (xviii) Mats to reduce fly rock blast to a maximum of 10 PPV should be provided.
- (xix) *Maximum depth of mining from general ground level at site shall not exceed 10m*
- (xx) No mining operations should be carried out at places having a slope greater than 45°.
- (xxi) 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.
- (xxii) The workers on the site should be provided with the required protective equipment such as ear muffs, helmet, etc.
- (xxiii) Garland drains with clarifiers to be provided in the lower slopes around the core area to channelize storm water.
- (xxiv) The transportation of minerals should be done in covered trucks to contain dust emissions.
- (xxv) The proponent should plant trees at least 5 times of the loss that has been occurred while clearing the land for the project.
- (xxvi) Disposal of spent oil from diesel engines should be as specified under relevant Rules/Regulations.
- (xxvii) Explosives should be stored in magazines in isolated place specified and approved by the Explosives Department.
- (xxviii) *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*



- (xxix) 100m buffer distance should be maintained from forest boundaries.
- (xxx) Consent from Kerala State Pollution Control Board under Water and Air Act(s) should be obtained before initiating activity.
- (xxxi) 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.
- (xxxii) In the case of any change(s) in the scope of the project, the project would require a fresh appraisal by this Authority.
- (xxxiii) 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.
- (xxxiv) 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.
- (xxxv) 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 Department of Environment and Climate Change, Govt. of Kerala 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.
- (xxxvi) 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.
- (xxxvii) 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 Directorate of Environment and Climate Change, Govt. of Kerala.
- (xxxviii) The details of Environmental Clearance should be prominently displayed in a metallic board of '3ft X 3ft' 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.
- (xxxix) 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.
- (xl) 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.




 for Member Secretary
G. RAJEEV
 Administrator
 State Environment Impact Assessment Authority
 Pallimukku, Pettah
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