



***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: Environmental Clearance -Application for environmental clearance for the quarry project in in Sy. No. 51/1,3,4,5,6, 53/2,3,4,5,6,7, 60/4,5,7 & 66/4 at Kizhakkambalam village, Kunnathunadu Taluk, Ernakulam District, Kerala by Sri. George Antony – Managing Director for M/s GK Granites - E.C- Granted.

**STATE ENVIRONMENT IMPACT ASSESSMENT AUTHORITY**

No. 522/SEIAA/EC3/3826/2014

*dated, Thiruvananthapuram 28-12-2015*

- Read: -* 1. Application dated nil from Sri. George Antony – Managing Director, Kureekkal House, Kizhakkambalam village, Kunnathunadu Taluk, Ernakulam.
2. Minutes of the 44<sup>th</sup> meeting of SEAC held on 12/13-08-2015.
3. Minutes of the 46<sup>th</sup> meeting of SEAC held on 29/30-09-2015.
4. Minutes of the 44<sup>th</sup> meeting of SEIAA held on 13-11-2015.

**ENVIRONMENTAL CLEARANCE NO. 115/2015**

Sri. George Antony – Managing Director, Kureekkal House, Kizhakkambalam village, Kunnathunadu Taluk, Ernakulam District, Kerala vide his application received on 07.08.2014, sought Environmental Clearance under EIA Notification, 2006 for their building stone quarry in an area of 7.0802 hectares in Sy. No. 51/1,3,4,5,6, 53/2,3,4,5,6,7(pt) , 60/4(pt)5(pt)7 & 66/4(pt) at Kizhakkambalam village, Kunnathunadu Taluk, Ernakulam District. The project comes under Category B, Activity 1(a), (i) as per the Schedule of EIA Notification 2006 (since it is below 50 hectares). 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.

### **DETAILS OF THE PROJECT**

1.	Category/Sub category & Schedule	<i>Category B2, 1(a),i</i>
2.	GPS readings in WGS 84 datum	N - 10 <sup>0</sup> 03' 34.58" - 10 <sup>0</sup> 03' 47.30" E - 76 <sup>0</sup> 24' 38.27" - 76 <sup>0</sup> 24' 50.23"
3.	Distance of the mining area from the nearest human settlement	300 m
4.	Right & nature of ownership of land	Own land
5.	Is the property forest land/govt. land/own land	Own land
6.	Extent of land in hectares	8.2780 Ha
7.	Proposed production capacity	2100 Tonnes per day (TPD)
8.	Ultimate depth of mining (in MSL)	<i>shall not exceed 10m</i>
9.	Quantity of topsoil estimated to be removed	0.17 lakh tonnes
10.	Method of mining	Mechanized Open cast
11.	Underground mining if any proposed	No
12.	a) Accreditation with serial number of QCI / NABET	NABET/EIA/SA052/0413
13.	Proposals for Corporate Social responsibility	Providing aggregates and crusher sand free of cost for construction of houses to poor people, extending medical aid and help for education for poor people in surroundings. Supplying of material and crusher dust free of cost for Panchayat works. Sponsoring cultural and sports activities
14.	Total cost of the project with details	85 lakh
15.	Soft copy of the proposal (in PDF format)	Yes
16.	Details of Authorized Signatory	Sri. George Antony – Managing Director, Kureekkal House, Kizhakkambalam village, Kunnathunadu Taluk, Ernakulam District, Kerala. Mobile No: 09496080008 E.mail: gkgranitesltd@gmail.com
17.	Details of NABET approved EIA consultant organization	Creative Engineers & Consultants, 9/4b, Barathwajar Street, East Tambaram, Chennai – 600 059. Ph – 044 – 22395170 Mobile : 9444133619 Email – cecgiri@yahoo.com

### Environmental Management Plan

AIR POLLUTION	<ul style="list-style-type: none"> <li>➤ Water sprinkling on haul road to suppress the dust.</li> <li>➤ Fixed swelling type water sprinkling arrangement at top of the administrative building, Top of crusher unit &amp; near canteen</li> <li>➤ Development of green belt.</li> <li>➤ Avoiding of overloading of tippers and covering of loaded tippers with tarpaulins during transportation.</li> </ul>
WATER POLLUTION	<ul style="list-style-type: none"> <li>➤ Sewage generated is properly discharged into septic tanks with soak pits.</li> <li>➤ The rain water falling in the quarry will be harvested up to +45m MSL. This pit will act as a settling pond to prevent solids escaping along with discharge, before outlet. etc. Most of the mine water will be used for green belt, dust suppression, etc.</li> <li>➤ Besides, it is also suggested to construct settlement ponds one on the northern side and another on the southern side of the lease area so that the water can be diverted into this pond. Clear supernatant water after settling can be let out of this pond after passing through settling traps.</li> </ul>
NOISE	<ul style="list-style-type: none"> <li>➤ Noise levels can be abated through good preventive maintenance of machineries, green belt creation, provision of ear muffs to workers, etc.,</li> <li>➤ Sound proof operator's cabin for equipments like dumpers, shovel, tippers, etc.,</li> <li>➤ Ground vibration are controlled through optimum design for burden &amp; spacing, Inclined drilling practice, Using ordinary electric milli second delay detonators, in combination with detonating fuse etc.,</li> </ul>
Solid waste Management	<ul style="list-style-type: none"> <li>➤ In future, mining operation is proposed to continue depth wards in the already mined out area only up to +00 RL and as such there will not be any waste or top soil generation. The entire mined out material from the quarry will be disposed to the adjacent crusher. As such, there will not be any top soil or waste generation and dumping in the future.</li> </ul>
Eco restoration	<ul style="list-style-type: none"> <li>➤ The mine area is already provided with compound wall. Green belt is already developed around office areas, approach road to the site and in other possible locations in the lease area and adjacent lands owned by the lessee. In future Green belt is proposed to be carried out about 1.4 Ha within the lease area.</li> </ul>

2. As per the KMMC Rules 2015, the proponent has submitted the approved Mining Plan. The proposal was placed in 44<sup>th</sup> meeting of SEAC. The Committee decided to defer the item for a site inspection.. Based on an overall evaluation of the site carried out on 18.09.2015 by the sub-committee of SEAC, Kerala, the quarry operations may be recommended with following conditions:

- 1. The steep cut faces on the western side by the side of RWH pit should be fenced and left as danger zone without any quarry operations.*
- 2. All the storm water must be led into the RWH pit. The deposited silt must also be cleaned periodically.*
- 3. Considering the topography, garland drains need not be insisted upon.*
- 4. In the absence of perennial streams in the vicinity, ultimate depth of mine will depend on the possible benches of 5m width and 5m height in the lease area. The nearest water body is a major stream in the valley at an elevation of + 5 m amsl.*
- 5. Other items from general conditions like a)Appropriate sign boards should be displayed, b) The blasting time must be displayed and strictly adhered to, c) The PPV values must be less than 10 mm/sec, d) Steps to be taken to limit fly rock to within the lease area. Rock fragments should not fall anywhere outside the lease area, e)Dust suppression mechanism must be in place f)A belt of trees (Vegetation belt) should be maintained all around the quarry but must be maintained till the entire life of quarry, g) The promised activity under CSR may be added.*

3. 46<sup>th</sup> Meeting of SEAC held on 29/30-09-2015 appraised the proposal based on the Mining Plan, Prefeasibility Report, field inspection 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 conditions, in addition to the general conditions stipulated for mining projects.

- 1. The steep cut faces on the western side by the side of RWH pit should be fenced and left as danger zone without any quarry operations.*
- 2. All the storm water must be led into the RWH pit. The deposited silt must also be cleaned periodically.*
- 3. Considering the topography, garland drains need not be insisted upon.*
- 4. In the absence of perennial streams in the vicinity, ultimate depth of mine will depend on the possible benches of 5m width and 5m height in the lease area. The nearest water body is a major stream in the valley at an elevation of + 5 m AMSL.*
- 5. To the extent possible local biodiversity management Committee shall be involved in the environmental management/restoration activities.*
- 6. Reclamation and eco-restoration should be done by planting native species.*

4. The case was considered by SEIAA in its 44<sup>th</sup> meeting held on 13-11-2015. The Authority decided to grant E.C to the quarry subject to all the site specific conditions proposed by SEAC and the mitigation measures undertaken in the PFR and Mining Plan will also be deemed to be part of the E.C to be issued. There will also be a condition that genuine complaints from people within the security area of the quarry will be a reason to reconsider the E.C. during its operation.

5. State Environmental Impact Assessment Authority, Kerala hereby accord environmental clearance for the quarry project of Sri. George Antony – Managing Director, M/s GK granites in Sy. No. 51/1,3,4,5,6, 53/2,3,4,5,6,7(pt) , 60/4(pt)5(pt)7 & 66/4(pt) at Kizhakkambalam village, Kunnathunadu Taluk, Ernakulam District, Kerala under the EIA notification 2006, subject to the specific conditions in paras 3 and 4 above and general conditions stipulated for mining projects as appended here to .

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 Pre-Feasibility report mining features and 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 the above chapters will be deemed to be part of these proceedings as conditions as undertaken by the proponent, as if incorporated herein.

7. Validity of the environmental clearance will be five years from the date of this clearance, subject to earlier review in the event of violation or non- compliance of any of the conditions stipulated herein.

8. 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, Ernakulam to take legal action under the Environment (Protection) Act, 1986.

9. The given address for correspondence with the authorised signatory of the project is  
Sri. George Antony - Managing Director, Kureekkal House, Kizhakkambalam village,  
Kunnathunadu Taluk, Ernakulam, Kerala.

Sd/-

P. MARA PANDIYAN, I.A.S.,  
Member Secretary, SEIAA

&

Addl. Chief Secretary  
Environment & Forests Department  
Government of Kerala.

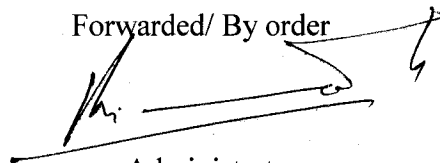
To,

Sri. George Antony,  
Managing Director, M/s G. K. Granites  
Kureekkal House,  
Kizhakkambalam village,  
Ernakulam

Copy to:

1. MoEF Regional Office, Southern Zone, Kendriya Sadan, 4<sup>th</sup> Floor, E&F Wing, II Block, Koramangala, Bangalore-560034
2. The Principal Secretary to Government, Environment Department, Government of Kerala
3. The District Collector, Ernakulam
4. Director, Dept. of Environment and Climate Change, Govt. of Kerala, Tvm-24
5. Director, Mining & geology, Thiruvananthapuram -4.
6. The Secretary, Ayyampuzha Grama Panchayat , Ernakulam, 683581
7. Chairman, SEIAA, Kerala
8. Website
9. S/F
10. O/C

Forwarded/ By order

  
Administrator  
SEIAA

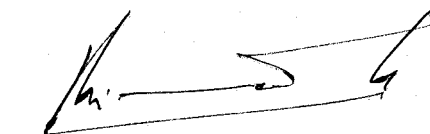
## STATE ENVIRONMENT IMPACT ASSESSMENT AUTHORITY KERALA

### 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 5 m and width should not be less than 5 m.
- (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) 200 m 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.
- (xxxix) 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.
- (xxxixii) In the case of any change(s) in the scope of the project, the project would require a fresh appraisal by this Authority.
- (xxxixiii) 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.
- (xxxixiv) 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.
- (xxxixv) 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](http://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.
- (xxxixvi) 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.
- (xxxixvii) 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.
- (xxxixviii) 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.
- (xxxixix) 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



Member Secretary, SEIAA Kerala