



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 No. 153 at Edayoor Village, Tirur Taluk, Malappuram District by Sri. Ardnan Mandrees, for M/s Vadakkumbram Granite Crusher-Granted- Orders issued.

**STATE ENVIRONMENTAL IMPACT ASSESSMENT
AUTHORITY**

No. 728/SEIAA/EC1/6106/2014 *dated, Thiruvananthapuram 13-01-2016*

- Read:-** 1. Application dated 05-12-2014 submitted by Sri. U. Ardnan Mandrees, Managing Partner, M/s Vadakkumbram Granite Crusher, Karekkadu Post, Katampuzha Via, Malappuram -676102.
2. Minutes of the 44th meeting of SEAC held on 12/13-08-2015.
3. Minutes of the 47th meeting of SEAC held on 13/14-10-2015.
4. Minutes of the 45th meeting of SEIAA held on 04- 12- 2015.

Environmental Clearance No. 136 /2015

Sri. Ardnan Mandrees, Managing Partner, M/s Vadakkumbram Granite Crusher, Karekkadu Post, Katampuzha (Via), Malappuram District vide his application and mining plan dated 05/12/2014 and 16/03/2015 has sought Environmental Clearance under EIA Notification, 2006 for the quarry project in Sy. No. 153 at Edayoor Village, Tirur Taluk, Malappuram District for an area of 1.185 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) dt. 24.12.2013 of Ministry of Environment and Forests, since the area of the project is below 25 hectares.

2. The proposed project site falls between 10°56'50.22"N to 10°56'45.28"N Latitude and 76°04'32.16"E to 76°04'27.86"E Longitude. The lease area consists of 1.185 hectares and as per revenue records which is private own land (patta land) The area is fully covered by massive charnockite formation are clearly visible above the surface on the South-Eastern side has a gentle slopping on the southern side with highest elevation of the area is at 126 MSL. Hence no alternate site was examined. The present land use is rubber plantation. The proposed project is for quarrying of 5,820 m³/annum of building stone from an area of 1.185 hectares of land. There is no mineral waste anticipated in the proposed quarry. The entire quarried out mineral will be utilized; hence the stripping ratio is 1:0. Domestic effluent will be discharged in septic tank and soak pit system. The quarry operation is proposed to carry out with conventional open cast semi mechanized mining with 5.0 meter vertical bench with a bench

width of 5.0 meter. Mining will be carried out up to the ultimate pit depth of 22 m (12 m along the hill slope up to general ground level of 114 m MSL & 10 m below the general ground level i.e. up to 104 m MSL) for the expected life of Twenty seven years. At the end of life of mine, excavated area will be converted into water pond and plantation. The total water requirement is 4.0 KLD, which will be met from bore-well and open well from nearby area and also from rain water harvesting plant. There is no toxic effluent expected to generate in the form of solid or liquid and gases and the no requirement of treatment of waste.

3. There will be fugitive emissions generated during material handling, transportation, loading, unloading etc. that are proposed to be managed by regular water sprinkling on haul road, quarry benches and internal roads and covered transportation, green belt development. No hazardous waste will be generated in the mine. As per year wise afforestation programme, plantation is proposed to be done in 33% of the lease area.

4. There are no protected areas like ecological landscape, cultural area, tourist, pilgrim areas etc. identified within the 15 Km radius. There is no religious place like church, temples, mosque etc. within the core zone. There is no prohibited area like defence establishments, electrical installation etc. in the vicinity of the proposed area. There is no Eco-sensitive area (ESZ) within the radius of 15 km from the proposed area. There is no protected sensitive species are identified within the 15km radius. Nearest river is Kunthi River which is situated at a distance of 5.50 Km SE of the project site. The nearest densely populated build-up area is located at 5.0 Km SW from the proposed quarry. There is no interlinked project associated with the quarry unit and the proponent stated that, there is no litigation pending against the lease area/applicant of the lease area in any court of law, CRZ recommendations are not applicable. The total cost of the project is Rs. 45, 00,000/-. It is proposed to spend Rs. 320,000 Lakhs/annum for various local development activities. Other details of the proposal are as under:

5. BASIC INFORMATION OF THE PROJECT

Environmental parameters considered	
WATER	
Facilities for liquid waste treatment	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. The seasonal water courses will be protected by a khathali plantation to reduce the soil erosion. Water accumulated in mine pit and settling tank will be used for dust suppression and plantation and excess water, if any, will be discharged outside only after ensuring proper settling. Domestic waste water will be discharged in Septic tank followed by soak pits. No waste water will be discharged by quarry operation.
Water quality meeting requirements	Regular monitoring and analysis will be carried out to meet the stipulated standards.
Water Regime	The quarry operation will be restricted well above the water table (Summer in 45m and rainy seasons in 40m); hence the water table will not be affected in any manner. The seepage and rain water will be drained out from the pit by the 5H.P motor pump and will be discharged through filter media to boundary barrier for afforestation and excess water will be sprayed on haul roads to prevent dust propagation in to the atmosphere.

LAND	
Access road to the site-Width & Condition	The road from the quarry to main road is a public road having width more than 10 m, is already in existence; the same road will be maintained and utilized for transportation.
Storage of explosives /hazardous substances	Explosive shall be procured by License vender and transported to the site at the time of blasting and used in accordance with Explosive Rules 2008, MSIHC Rules 1989 Mines Act 1952 and MMR 1961 and with necessary permission for blasting from DGMS. Small Dia. 25 mm slurry explosives are proposed to be used for shattering and heaving effect for removal and winning of building stone. No deep hole drilling or primary blasting is proposed. Blasting will be carried out by competent qualified blaster under the supervision of qualified statutory mine manager. Sufficient caution will be given to the public by Siren and red flags.
Facility for solid waste management	There is no solid waste generation in the mine. Top soil to the tune of 5,340 m ³ will be generated during the life of the mine. The soil will be used for plantation and partial backfilling of the mined out void. The waste generated during quarrying activity is negligible rock mass during handling and re-handling. Hence, there is no waste in this quarrying operation. There is no other solid waste generation during the quarrying operation.
Significant land disturbance resulting in erosion, subsidence & instability	As per seismic zonation map of India, 2001, the proposed area comes under Zone-II. 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.
Top soil, overburden etc.	The area is an elevated terrain so no overburden is anticipated during mining operation. About 5,340 m ³ soil will be generated, which will be used in plantation and partial backfilling of the mined out void.
NOISE	
Noise pollution control measures	<p>The major noise generating source from the proposed activity is due to vehicular movement.</p> <p>Control Measures:</p> <p>Vehicle speed will be maintained at 20 KMPH within the proposed mining area. Proper training to personnel to create awareness about adverse noise level effects. Planned noise monitoring at suitable locations in the proposed area and outside locations for proper effective remedial actions. The greenbelt, which is being provided, will act as noise attenuator.</p> <p>Mining operation is being carried out by semi-mechanized method. Noise from operation of drill machine and hauling equipments. Proper and regular maintenance of machinery, earmuffs and earplugs will be provided to the persons exposed to noise levels and periodical medical check-up will be conducted. Development of thick green belt around mining area. Periodic maintenance of machinery and 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. 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.</p>
Noise level monitoring	Periodic air quality monitoring will be carried out in mining area and nearby villages to ensure ambient air quality with in permissible limits.

AIR	
Likely emissions affecting environment	Negligible emissions of SO ₂ & NO ₂ will be there due to use of diesel operated machinery and during blasting. Vehicular emissions will be kept under control by proper maintenance
Air pollution control measures: By deposition of pollutants emitted to air into the land or into water	During operation phase there will be dust emissions mainly from excavation, loading, unloading, mineral handling, transportation and mobile sources. Provision of dust mask to workers working at highly dust prone and affected areas. Control measures like water sprinkling on haul roads, limiting the speed and regular maintenance of vehicles, covered transportation, green belt development etc. will be adopted to minimize the same. Thus, dust settling on land is expected to be very low and will be nontoxic.
Air quality monitoring	Air quality will be monitored periodically as per Norms and Mitigation Measures will be carried out to prevent dust and Air propagation in to air. Mist Water spraying will be carried out to suppress dust.
ENERGY	
Energy requirement	The proposed Building stone quarrying does not require any power supply for the quarrying operation. The average diesel requirement will be 10 L/hr of HSD and will be brought from nearby diesel pumps.
BIODIVERSITY	
Presence of any endangered species or red listed category	There is no endangered, endemic or scheduled flora 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	There will not be any loss of native species of genetic diversity as the quarry already exists and continuation of the same will not affect or loss of native species in general
SOCIAL ASPECTS	
Proximity to nearest human settlement	Karekkad at a distance of 1.5 Km towards West
CSR related to the project	In the following sectors: 1. Education 2. Health 3. Community Development and also as per Chapter 5
GENERAL	
Details of Authorised Signatory	Sri. Ardnan Mandrees Managing partner M/s. Vadakkumbram Granites Crusher, Karekkadu Post, Katampuzha Via, Malappuram District, Kerala- 676553. Mobile No. : +91 9349887676 E-Mail: adnanmandris@gmail.com
Details of NABET approved EIA consultant Organisation	M/s Anacon Laboratories Pvt. Ltd., NABET/EIA/RAO15/042 dated 30/07/2015, 60, Bajiprabhu Nagar, Nagpur-440 033, Maharashtra. Lab: FP-34, 35, Food Park, MIDC, Butibori, Nagpur-441 122, Ph: 0712- 2242077, 9373287475, Email: anaconngp@gmail.com , anaconlabngp@gmail.com Website: www.anaconlaboratories.com , www.anacongarway.com

6. The proposal was appraised in the 44th meeting of SEAC held on 12th & 13th August 2015 and the Committee defer the item for field visit. The sub-committee of SEAC visited the quarry project of Sri. Ardnan Mandrees, M/s. Vadakkumbram Granites Crusher on 2 October 2015. The field visit report is as follows:

"The quarry is an existing one. The crusher unit is operating inside the site. Open cast mining. No benches have been formed. The overburden has a thickness of approximately 3m. The overburden is not managed properly. It is deposited at a place away from the site. Agricultural activities are being carried out around the site. The access road to the site is very narrow and not maintained properly and at many locations in a dangerous state. The rainwater is not collected properly and they are not maintaining the drainage. The proponent has not provided any signboards or safety signals at the quarry site.

In addition to the general conditions, the following specific conditions should be added:

1. *The mining should be continued only after maintaining the access road properly. The deep cutting on the two sides of the hills should be suitably maintained so as to avoid any land slide.*
2. *The mining should be continued only after the formation of benches*
3. *The overburden should be deposited at a safer place and stored in the designated places for future restoration of the land and provided with protective support walls*
4. *The trees and vegetation around the quarry site should be conserved*
5. *Proper sign boards and fencing should be provided all around the quarry site*
6. *The drainage water from the quarry should be collected properly, desilted and clarified before discharge.*
7. *A proper rainwater collection pond should be maintained inside the site.*
8. *The CSR activity was found to be not specific and should be strengthened".*

7. The proposal was again placed in 47th meeting of SEAC held on 13th and 14th October 2015 and the Committee 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 mining should be continued only after maintaining the access road properly. The deep cutting on the two sides of the hills should be suitably maintained so as to avoid any land slide.
2. The overburden should be deposited at safer designated places for future restoration of the land and provided with protective support walls
3. The trees and vegetation around the quarry site should be conserved
4. Proper sign boards and fencing should be provided all around the quarry site
5. The drainage water from the quarry should be collected properly, desilted and clarified before discharge.
6. A proper rainwater collection pond should be maintained inside the site.
7. To the extent possible local biodiversity management Committee shall be involved in the environmental management/restoration activities.
8. Reclamation and eco-restoration should be done by planting native species.
9. The proponent is directed to submit a more realistic social responsibility projects to SEIAA.

8. The proposal was considered by SEIAA in its 45th meeting held on 04.12. 2015. The Authority decided that Environmental Clearance be given to the quarry project subject to the specific recommendations of SEAC and the above site specific conditions in addition to the general conditions stipulated for mining projects and the mitigation measures undertaken in the EMP in the PFR. 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. Ardnan Mandrees, M/s Vadakkumbram Granite Crusher in Survey No. 153 of Edayur Village, Tirur Taluk, Malappuram District, Kerala subject to the specific conditions in para 7 above and the general conditions annexed hereto.

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 Chapter 6 of 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 3 of EMP (Mining), Chapter 6 (EMP) of the Mining Plan, Chapter 7 (Blasting), Chapter 11 (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.

10. 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 or genuine complaints from residents within the security area of the quarry.

11. 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, Malappuram to take legal action under the Environment (Protection) Act 1986.

12. The given address for correspondence with the authorised signatory of the project is Sri. Ardnan Mandrees, Managing partner, M/s. Vadakkumbram Granites Crusher, Karekkadu Post, Katampuzha (Via), Malappuram, Kerala.



Sd/-
P. Mara Pandiyan., I.A.S
Member Secretary (SEIAA)

&
Additional Chief Secretary to Government
Environment & Forest Department
Government of Kerala.

To,

Sri. Ardnan Mandrees
Managing partner
M/s. Vadakkumbram Granites Crusher,
Karekkadu Post, Katampuzha (Via),
Malappuram District, Kerala- 676553.

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, Malappuram
4. The Director, Department of Environment & Climate Change.
5. The Director, Mining and Geology Department, Kesavadasapuram, Thiruvananthapuram-4
6. The Secretary, Edayur Grama Panchayat, Kuttippuram Block, Edayur P.O., Malappuram- 676554.
7. Chairman, SEIAA
8. Website
9. Stock File
10. O/C.



Forwarded/ By order

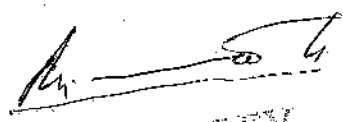
Administrator
SEIAA

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 or consent given by any other authority for the same project.




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