



Validity expires on 09/10/2022

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

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

Sub: SEIAA- Environmental clearance for the quarry project M/s Payyavoor Crushers in Sy. No. 1/1 at Payyavoor Village, Thaliparamba Taluk, Kannur District, Kerala by Sri. Shaju Jose – EC Granted Orders issued.

**STATE ENVIRONMENTAL IMPACT ASSESSMENT AUTHORITY, KERALA**

**No.865/SEIAA/EC4/3095/2015**

***Dated, Thiruvananthapuram 10/10/2017***

- Ref:
1. Application dated 20/7/2015 by Sri. Shaju Jose, M/s Payyavoor Crushers, Payyavoor Village, Thaliparamba Taluk, Kannur District, Kerala – 670 633
  2. Minutes of the 64<sup>th</sup> meeting of SEAC, Kerala, held on 16<sup>th</sup> & 17<sup>th</sup> November, 2016.
  3. Minutes of the 69<sup>th</sup> meeting of SEAC, Kerala, held on 09<sup>th</sup> & 10<sup>th</sup> March 2017.
  4. Minutes of the 72<sup>nd</sup> meeting of SEAC held on 8<sup>th</sup> and 9<sup>th</sup> May 2017.
  5. Minutes of the 71<sup>st</sup> meeting of SEIAA held on 20<sup>th</sup> July 2017.
  6. Affidavit received on 5/10/2017 from Shri. Shaju Jose

**ENVIRONMENTAL CLEARANCE NO.72/2017**

Sri. Shaju Jose, M/s Payyavoor Crushers, Payyavoor Village, Thaliparamba Taluk, Kannur District Kerala, vide his application received on 05-08-2015 has sought Environmental Clearance under EIA Notification, 2006 for the quarry project in Sy. Nos. 1/1 at Payyavoor Village, Thaliparamba Taluk, Kannur District, Kerala for an area of 2.85 hectares. The project comes under 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		
1.	File No.	865/SEIAA/KL/EC4 3095/2014
2.	Name /Title of the	(Granite Building Stone Quarry) Payyavoor stone Quarry of

	project	<b>M/s. Payyavoor Crushers</b>
3.	Name and address of project proponent.	Mr. Shaju Jose Managing Partner Payyavoor Crushers Payyavoor Village, Thaliparamba Taluk, Kannur District, Kerala, India
4.	Owner of the land	Mr. Shaju Jose
5.	Survey No. District/Taluk/ and Village etc.	Sy. No. 1/1, Kannur District, Thaliparamba Taluk, Payyavoor Village,
6.	Details of period of lease or permit with number including the beginning and expiry date of lease/permit period <b>(Copy to be attached)</b>	New Proposal For Mining Lease
7.	Present Status of the project a. Date & Year of starting the work of the quarry project. b. whether the quarry is working at present or not? c. If stopped working since when?	a. 23.4.2008 (Mining Permit) b. No c. 2016
8.	Date of submission of Application	5.8.2015
9.	Brief description of the project.	The granite Stone Quarry - 'Payyavoor Stone Quarry' of M/s Payyavoor Crushers, over an extent of 2.85Ha is located in privately owned land at Sy No 1/1 in Payyavoor Village, Thaliparamba Taluk, Kannur District, Kerala State. The proposed quarry lease area falls on Toposheet No. 48P/12 published by Survey of India.
10.	Details of Authorized Signatory and address for correspondence	Mr. Shaju Jose Managing Partner Payyavoor Crushers Payyavoor Village, Thaliparamba Taluk, Kannur District, Kerala, India
<b>Land Details</b>		

11.	Extent of area in hectares	2.85Ha	
12.	Is the property forest land/Govt. land/own land/patta land	Own Land	
13.	Quantity of top soil/over burden produced and managed	5296 Tonnes (Top Soil)	
14.	Latitude and Longitude	Latitude	N12°07'43.9." to N12°07'50.9"
		Longitude	E75°35'40.4" to E75°35'49.4"
15.	Topography of land and elevation	The granite Building Stone is the general rock type to be excavated in this area. The quarry lease is located on the slope of the hillock. The highest elevation in this area is 425mRL and the lowest elevation is 342mRL.	
16.	Slope analysis	Gentle slope with max angle of about 19°	
17.	Will there be any significant land disturbance resulting in soil erosion, subsidence & natural drainage.	No	
18.	Access road to the site width and condition	The access road is an asphalt road. The width of the access road will be maintained at 7m.	
19.	Will there be any adverse impact on the aesthetics of the proposal site	A well developed green belt of 7.5m with plantation of native species would enhance the aesthetics of the area at the conceptual stage.	
Mining details			
20.	Minimum and Maximum height of excavation.	The highest elevation in this area is 425mRL and the lowest elevation is 342.2 mRL.	
21.	Life of mine proposed.	15 Years	
22.	Underground mining if any proposed	No	
23.	Method of Mining	Open cast semi-mechanized method	
24.	Distance from the adjacent quarry		
25.	Cluster condition if any	No	
26.	Has "No cluster certificate" submitted?	District Geologist Kannur Vide Letter No: DOC/M-305/15 Dated:25.2.2015	

27.	Distance from nearby habitation	The nearest Habitation is Chandankampara which is about 3Km from the area.
28.	Distance from nearby forest, if applicable	Padinalknad Ghat Reserve Forest and Brahmagiri forest is located at 3km from the mine.
29.	Distance from protected area, Wildlife Sanctuary, National Park etc.	Brahmagiri Wildlife Sanctuary is located at 3km from the mine. However, as the area is less than 5Ha and the proposal is for mining / quarrying of Minor minerals (Building Stone) , General Conditions of the EIA notification 2006 does not apply
30.	Distance from nearby streams/rivers/National Highway and Roads	The Kerala and Karnataka state boundary is located within 3 km from the proposed quarry. However, as the area is less than 5Ha and the proposal is for mining / quarrying of Minor minerals (Building Stone) , General Conditions of the EIA notification 2006 does not apply
31.	Is ESA applicable? If so distance from ESA limit	Not applicable
32.	Has approved mining plan, prepared by RQP submitted?	Yes
33.	Capacity of production in TPA	Max Production : 2,30,675 TPA
34.	Details of mining process	The granite building stone quarry is proposed to be operated by developing benches of 5m height and 5m ultimate width by Opencast Semi-Mechanized Mining Method. The semi-mechanized operation of quarry shall use excavators, tippers, rock breakers, Jack hammer drilling and blasting. The excavated material of about -150mm size boulders shall be directly loaded into trucks and transported to the crushing plant located outside the quarry area. No secondary blasting like Pop-shooting or Plaster-shooting to break the bigger boulders shall be undertaken to avoid fly rock and sound and vibrations from Air blasts, from secondary Blasting.
<b>Details of Project cost</b>		
35.	Land cost	1 Lakh

		There is No Crushing & Screening or Processing Plant within the Proposed area. Mining Project cost																																							
36.	a) Plant and Machinery	<table border="1"> <thead> <tr> <th>Sl No.</th><th>DESCRIPTION</th><th>Capital investment Cost in lakh Rs.</th></tr> </thead> <tbody> <tr><td>1</td><td>Water Tanker (1 No.)</td><td>12.00</td></tr> <tr><td>2</td><td>Jeep (1 No.)</td><td>10.00</td></tr> <tr><td>3</td><td>Excavator and Rock breaker</td><td>60.00</td></tr> <tr><td>4</td><td>Strengthening of Roads</td><td>25.00</td></tr> <tr><td>5</td><td>Temporary sheds, Rest shelters etc.,</td><td>12.00</td></tr> <tr><td>6</td><td>Environmental control measures</td><td>9.00</td></tr> <tr><td>7</td><td>D.G.Set</td><td>01.00</td></tr> <tr><td>8</td><td>Mine Development</td><td>30.00</td></tr> <tr><td>9</td><td>Land Expenses</td><td>12.00</td></tr> <tr><td>10</td><td>Operational Exp</td><td>20.00</td></tr> <tr><td>11</td><td>Miscellaneous</td><td>9.00</td></tr> <tr><td colspan="2"><b>Total</b></td><td><b>200.00</b></td></tr> </tbody> </table>	Sl No.	DESCRIPTION	Capital investment Cost in lakh Rs.	1	Water Tanker (1 No.)	12.00	2	Jeep (1 No.)	10.00	3	Excavator and Rock breaker	60.00	4	Strengthening of Roads	25.00	5	Temporary sheds, Rest shelters etc.,	12.00	6	Environmental control measures	9.00	7	D.G.Set	01.00	8	Mine Development	30.00	9	Land Expenses	12.00	10	Operational Exp	20.00	11	Miscellaneous	9.00	<b>Total</b>		<b>200.00</b>
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37.	Total Cost	200 Lakhs																																							
38.	Financial Statement including funding source and details of insurance etc.	The project proponent will be partly funded with own funds, and partly with bank loans.																																							

	Management Plan	Air Pollution	Water sprinkling and other mitigation measure will be provided during mining activity to control the air emission
		Water Pollution	Water quality in the study area in meeting the requirements prescribed by the PCB
		Noise	Adequate mitigation measure will be provided to control the noise emission during blasting & mining activity
		Solid Waste Management	There is no solid waste. The top soil of 5296 Tons generated shall be used for development of greenbelt.
		Eco-restoration	The afforestation in Green belt area in an extent of 0.55Ha would be completed and a well developed permanent Green belt area will thus be established by the end of 5yr period. To prevent direct impact of surface run offs on soil erosion, the resistant and good root bearing grass species and plants, shall be planted. At the end of life of mine, the excavated pit of 2.20 Ha shall be developed for Pisciculture. The pit shall be properly fenced with barbed wires with single entry and exit for Fishing and/ or drawing water. The local Fisheries department would be consulted to procure and develop the right fish seedlings and varieties. The old dump of 0.1 Ha. shall be terraced and afforested. Series of gully plugs shall be constructed across the water course to check any silt flowing along with the surface runoff in the valleys.
39.	Whether Environment Management Plan or Eco restoration Plan satisfactory?	Yes	
40.	Does it suggest mitigation measures for each activity	Yes	
41.	If Pre-Feasibility Report (PFR) satisfactory	Yes	
42.	Does it need public hearing	No	
43.	Details of litigation and Court verdict if any	No	
44.	XI. Details of public complaint, if any	No	
45.	Details of statutory sanction required	All required statutory permissions shall be obtained from	

		concerned authorities
46.	If CRZ recommendation applicable?	No

**PART B**  
**Environment Impact Assessment and Mitigation Measures**

**Impact on water**

Impact on water

47.	Details of water requirement per day in KLD	<p>The water requirement is to the tune of 37 KLD About 35 KLD (5 KLD for plantations and 30 KLD for dust suppression) will not be required for about 4-5 months in a year, during the monsoon and rainy/ wet days)</p> <table><tr><th>Purpose</th><th>Qty Required m<sup>3</sup>/day</th></tr><tr><td>Drinking water &amp; Domestic</td><td>2</td></tr><tr><td>Afforestation</td><td>5*</td></tr><tr><td>Dust suppression</td><td>30*</td></tr><tr><td><b>Total</b></td><td><b>37</b></td></tr></table> <p><i>* The water for Plantation and dust suppression will not be required for 4-5 months in a year during monsoon and wet/ rainy days.</i></p>	Purpose	Qty Required m <sup>3</sup> /day	Drinking water & Domestic	2	Afforestation	5*	Dust suppression	30*	<b>Total</b>	<b>37</b>
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48.	Water source/sources.	The water shall be brought from old abandoned quarries and borehole located outside the lease area										
49.	Expected water use per day in KLD.	37 KLD.										
50.	Details of water requirements met from water harvesting.	Partly from the RWHP										
51.	What are the impact of the proposal on the ground water?	<p>The mine is located at higher elevation on hillock and the water table in surrounding is about 10-40m below the general surface at the bottom of the hillock.</p> <p>The expected deepest mining operation shall be about 340mRL , which will be much above the ground water table. Hence no ground water is going to encounter during mining</p>										
52.	How much of the water requirement can be met from the recycling of treated waste water? (Facilities for liquid waste treatment)	Not applicable										

53.	What is the incremental pollution load from waste water generated from the proposed activities?	Not applicable																														
54.	How is the storm water from within the site managed?	The water is properly diverted by garland drains to the silt settling tank (SST), the over flow from the silt settling tank (SST) is directed to Rain Water Harvesting Pond(RWHP).																														
Impact on Biodiversity and Eco restoration Programmes																																
55.	Will the project involve extensive clearing or modification of vegetation (Provide details)	No																														
56.	What are the measures proposed to minimize the likely impact on vegetation (details of proposal for tree plantation/landscaping)	0.55 Ha area earmarked for safety barrier shall be used for green belt development by planting 800 local species. Apart from this Afforestation shall be done on the haulage road by planting 200 saplings Afforestation program																														
		<table><tr><th>Year</th><th>No of Plants</th><th>Green Belt area covered</th><th>Type of Saplings</th><th>Location</th></tr><tr><td>I-Year</td><td>200 saplings</td><td>0.18 Ha</td><td>Palaka payyani</td><td rowspan="6">Green belt area &amp; Haulage Road</td></tr><tr><td>II-Year</td><td>100 saplings</td><td>0.05Ha</td><td>Vatta</td></tr><tr><td>III-Year</td><td>100saplings</td><td>0.03Ha</td><td>Kadaplavu, mango and also plants like Rock</td></tr><tr><td>IV-Year</td><td>300 saplings</td><td>0.27Ha</td><td>Banana, Kotta.</td></tr><tr><td>V-Year</td><td>100 saplings</td><td>0.02Ha</td><td>Inchipullu, Communist</td></tr><tr><td></td><td>800 saplings</td><td>0.55 Ha</td><td>Paccha, etc.</td></tr></table>	Year	No of Plants	Green Belt area covered	Type of Saplings	Location	I-Year	200 saplings	0.18 Ha	Palaka payyani	Green belt area & Haulage Road	II-Year	100 saplings	0.05Ha	Vatta	III-Year	100saplings	0.03Ha	Kadaplavu, mango and also plants like Rock	IV-Year	300 saplings	0.27Ha	Banana, Kotta.	V-Year	100 saplings	0.02Ha	Inchipullu, Communist		800 saplings	0.55 Ha	Paccha, etc.
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Under plantation programme, it is suggested to undertake the plantation in Green belt area, along the haulage road and nearby schools. The species to be grown in the areas shall be dust tolerant and fast growing species so that a permanent green belt is created and well established.																																
57.	Is there any displacement of fauna – both terrestrial and aquatic. – If so	c. No d. No																														

	what are the mitigation measures ? Presence of any endangered species or red listed category (in detail)	
<b>Impact on Air Environment</b>		
58.	What are the mitigation measures on generation of dust, smoke and air quality	<ul style="list-style-type: none"> <li>➤ Dust suppression systems (water spraying) would be adopted at mine working &amp; loading points.</li> <li>➤ Drills shall be equipped with dust extractors to reduce dust generation.</li> <li>➤ Speed control on vehicle movement, to limit speed.</li> <li>➤ The blasting shall be carried out during day hours, it shall be avoided during strong wind and temperature inversion condition.</li> <li>➤ Excavation operations shall be suspended during very strong wind condition.</li> <li>➤ Wind reduction control by plantation. Trees and shrubs will be grown along the Green belt area/safety barrier area along the periphery of the quarry and along the haul roads.</li> <li>➤ Plantation of wide leaf trees, creepers and tall grass along approach roads, and around hillock will help in to suppress the dust.</li> <li>➤ Proper tuning of excavators and compressors will be ensured to keep the gas emissions from the vehicles within the prescribed norms of the CPCB and MoEF guidelines.</li> <li>➤ All workers shall be provided with personal protective devices eg. Dust Mask, Goggles, Helmet, etc.</li> <li>➤ Air quality shall be regularly monitored both in the core zone and buffer zone.</li> </ul>
59.	Details of internal traffic management of the site.	The existing transport Facilities will be utilized for the proposed project. The proposed project does not involve any closure of diversion of existing transport routes.
60.	a) Details of noise from traffic, machines and vibrator and mitigation measures	<p>Noise level increases in the Payyavoor Stone Quarry due to excavation, drilling, blasting, handling &amp; transportation of granite building stone and operation of mining equipment.</p> <p><b><u>MITIGATING MEASURES:</u></b></p> <p>Identification of mitigation measures for noise abatement including noise barriers for point sources and line sources are undertaken and measures to minimize the impact is proposed.</p> <ul style="list-style-type: none"> <li>• The equipments and machines shall be maintained properly. Particular attention should be given to the silencers and mufflers.</li> <li>• Use of sharp drilling bits, delivery of compressed air at optimal pressure and proper maintenance of compressor, drilling machine, jackhammers and tipper trucks.</li> </ul>

		<ul style="list-style-type: none"><li>Limiting the speed of empty haulage vehicles/tippers to a moderate level to prevent undue noise.</li><li>In addition to it, Green belt development shall be undertaken around the quarry lease area to minimize propagation of noise.</li><li>Provision of rotation of workers to minimize exposure time as well as provision of earmuffs to workers exposed to high noise areas is also envisaged.</li><li>Regular monitoring of noise level shall be done within the core zone and the buffer zone of the quarry lease area.</li></ul>																									
61.	Impact of DG sets and other equipments on noise and vibration and ambient air quality around the project site and mitigation measures	The impact on noise by DG set and other equipments is minimized by providing proper silencers and a ear muffs /plugs is issued to all employees working near machineries																									
62.	Air quality monitoring in detail	<p>The detected ambient air quality in core and buffer zone is given in the table shown below, Detected AAQ in core &amp; buffer zone</p> <table><tr><th>Area</th><th>PM10µg/m<sup>3</sup></th><th>PM2.5 µg/m<sup>3</sup></th><th>SO2 µg/m<sup>3</sup></th><th>NOx µg/m<sup>3</sup></th></tr><tr><td>Core Zone</td><td>62</td><td>30</td><td>13.8</td><td>12.6</td></tr><tr><td>Onnampalam</td><td>32</td><td>18</td><td>7.8</td><td>6.2</td></tr><tr><td>Chandankampara</td><td>41</td><td>20</td><td>6.8</td><td>8.2</td></tr><tr><td>Cheriya Arrikamala</td><td>36</td><td>21</td><td>8.2</td><td>7.4</td></tr></table>	Area	PM10µg/m <sup>3</sup>	PM2.5 µg/m <sup>3</sup>	SO2 µg/m <sup>3</sup>	NOx µg/m <sup>3</sup>	Core Zone	62	30	13.8	12.6	Onnampalam	32	18	7.8	6.2	Chandankampara	41	20	6.8	8.2	Cheriya Arrikamala	36	21	8.2	7.4
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<b>Energy Conservation</b>																											
63.	Details of power requirement and source of supply.	DG sets will be used as sources for power supply																									
64.	Details of renewable energy (non – conventional) used.	Not applicable																									
<b>Risk Management</b>																											
65.	Are there sufficient measures proposed for risk hazards in case of emergency such as accident at the site?	<p>a. Safety of the employees including the contract employees and safety of the work environment shall be given top priority at the granite Building stone Quarry of M/s.Payyavoor Crushers.</p> <p>All safety standard as per the Mines Act 1952 and Rules and Regulations comprehended there under shall be strictly followed at all times during and after the operations</p>																									
66.	Are proposals for fencing around the quarry	<p>b. Fencing shall be made all along the quarry area with entry and exit gate.</p> <p>The top of all working pit.</p>																									

	<p>satisfactory? Storage of explosives/hazardous substance in detail Facility for solid waste management</p>	<p>c. Explosive magazine of the company is located in Survey No 1/1, Payyavoor Village, Thaliparamba Taluka, Kannur District, Kerala . Explosive license No. E/SC/KL/22/1167(E59228) d. It is expected to recover 5296 tonnes top soil during quarrying this area. This generated top soil shall be used in afforestation / Green belt / Safety barrier all along the periphery of the quarry lease area. No other waste is envisaged from the operations</p>																				
<b>Socio Economic Impacts</b>																						
67.	<p>Will the project cause adverse effects on local communities disturbance to sacred sites or other cultural values. What are the safe guards proposed?</p>	<p>The project shall generate 60 direct and 60 indirect employment to the local people. Hence, the activity will contribute to the improvement of income status of the local people. The quarry project will also improve infrastructure facilities, eventually leading to the overall development of the area, resulting in the improvement of standard of life of local population. It can be summarized that the development of Granite building stone quarry of M/s. Payyavoor Crushers, with a well managed EMP &amp; CSR activities, shall have a positive impact on the socio-economic and the environment of the area and lead to overall Sustainable Development of the region.</p>																				
68.	<p>Will the proposal result in any changes to the demographic structure of local population. If so, provide details.</p>	<p>Most of the employees will be employed from the nearby villages so there will not be much change in the demographic structure</p>																				
69.	<p>Are the CSR proposals satisfactory. Give details</p>	<table><tr><th>Sl No</th><th>Activity</th><th>Period</th><th>Amount (Lakhs)</th></tr><tr><td>1</td><td>Santhawanam cancer home</td><td>One time</td><td>5.00</td></tr><tr><td>2</td><td>Provision of proper fencing for the sports ground &amp; basket ball court at the Cherupushpam High School at Chandankampara.</td><td>One time</td><td>2.00</td></tr><tr><td>3</td><td>Provision of bore well facility at the Govt UP school at Payyavoor village</td><td>One time</td><td>1.00</td></tr><tr><td></td><td><b>Total</b></td><td></td><td><b>8.00</b></td></tr></table> <p>CSR- Initial Commitment (one time)</p> <p>Provision of proper fencing for the sports ground &amp; basket ball court at the Cherupushpam High School at Chandankampara.</p> <p>CSR-Annual Commitment</p>	Sl No	Activity	Period	Amount (Lakhs)	1	Santhawanam cancer home	One time	5.00	2	Provision of proper fencing for the sports ground & basket ball court at the Cherupushpam High School at Chandankampara.	One time	2.00	3	Provision of bore well facility at the Govt UP school at Payyavoor village	One time	1.00		<b>Total</b>		<b>8.00</b>
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		<table border="1"> <tr> <th>Sl No</th> <th>Activity</th> <th>Period</th> <th>Amount (Lakhs)</th> </tr> <tr> <td>1</td> <td>Health camp in one nearby village each year</td> <td>Yearly once</td> <td>1.50</td> </tr> <tr> <td>2</td> <td>Santhawanam cancer home</td> <td>Yearly</td> <td>1.00</td> </tr> <tr> <td>3</td> <td>Scholarships for top girl students passing out from 7<sup>th</sup> std from the three schools</td> <td>Yearly once</td> <td>0.50</td> </tr> <tr> <td>4</td> <td>Books, News Papers &amp; Periodicals to school library</td> <td>Yearly</td> <td>0.25</td> </tr> <tr> <td>6</td> <td>Project promotion for Replacement of polythene bags in Payyavoor</td> <td>Yearly</td> <td>2.00</td> </tr> <tr> <td>8</td> <td>Toilet facility with overhead water tank in the surrounding school</td> <td>Yearly 2 school</td> <td>3.00</td> </tr> <tr> <td>9</td> <td>Sports facility at all the three schools</td> <td>Yearly</td> <td>0.25</td> </tr> <tr> <td>10</td> <td>Teaching aids to nearby primary school</td> <td>Yearly</td> <td>0.25</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td colspan="3">Total</td> <td>8.75</td> </tr> </table>	Sl No	Activity	Period	Amount (Lakhs)	1	Health camp in one nearby village each year	Yearly once	1.50	2	Santhawanam cancer home	Yearly	1.00	3	Scholarships for top girl students passing out from 7 <sup>th</sup> std from the three schools	Yearly once	0.50	4	Books, News Papers & Periodicals to school library	Yearly	0.25	6	Project promotion for Replacement of polythene bags in Payyavoor	Yearly	2.00	8	Toilet facility with overhead water tank in the surrounding school	Yearly 2 school	3.00	9	Sports facility at all the three schools	Yearly	0.25	10	Teaching aids to nearby primary school	Yearly	0.25					Total			8.75
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70.	What are the projects benefits in terms of employment potential?	The project shall generate 60 direct and 60 indirect employment to the local people. Hence, the activity will contribute to the improvement of income status of the local people.																																												
<b>PART C</b>																																														
71.	Details of NABET approved EIA Consultant engaged-Their name, address and accreditation details	<p>Certificate No: NABET/EIA/1618/RA 0030</p> <p>M/s GLOBAL Environment &amp; Mining Services, #394, 1st Stage, 1st Cross, 5th Main, 5th Block, HBR Layout Bangalore – 560043, Karnataka State, India. Ph: +91 8025432447. <u>H. O.</u> 3rd Main Road, Basaveshwara BadawaneHOSPET – 583201, Bellary Dist. (Karnataka)</p>																																												
<b>Summary and Conclusion</b>																																														
72.	Overall justification for implementation of the project.	<p>➤ The magnitude of the proposed mining activity is quite small.</p> <p>➤ This would provide direct and indirect employment to the</p>																																												

		<p>local people.</p> <ul style="list-style-type: none"> <li>➤ This new project will meet the development needs of the local region and the state without causing any negative influence on the environment.</li> <li>➤ At the end of the mine at the conceptual stage the well developed Green belt and the conversion of the mined out pit into a Pisciculture pond shall have a very positive effect on the Bio-diversity of the area this will also serve as a small water reservoir.</li> <li>➤ It can be summarized that the development of Granite building stone quarry of M/s. Payyavoor Crushers, with a well managed EMP &amp; CSR activities, shall have a positive impact on the socio-economic and the environment of the area and lead to overall Sustainable Development of the region.</li> </ul>
73.	Explanation of how adverse impact have been mitigated.	The Mitigation methods of air, water, noise & land have been explained above in the relevant columns from 48-61.

2. The proposal was placed in the 64<sup>th</sup> meeting of SEAC, Kerala, held on 16<sup>th</sup> & 17<sup>th</sup> November, 2016. The Committee appraised the proposal based on the Mining Plan, Pre-feasibility Report and all other documents submitted along with Fom.1. They observed that the Mining Plan submitted is on the basis of KMMC Rules 1967 and is to be revised as per KMMC Rules 2015. The proponent opined that the pit formed due to mining activities is to be used as a pisciculture pond at the time of closure of mine. A crusher is associated with quarry. The committee is of the apprehension that the proposed area is a part of Arikkamala and between the hill top and quarry there is a stream is flowing.

The committee decided to defer the item for a field inspection to verify the ground realities and the presence of stream, if any in the area.

Subsequently, the site visit to the quarry was carried out on 12<sup>th</sup> February 2017 by Dr P S Harikumar and Dr Khaleel Chovva. The proponent was present at the site. The report is as follows:

*The land use classification as per revenue records is private own land.*

*On the date of visit, no mining activity was seen at the site. The total quantity of waste to be generated from the lease area consists of top soil & over burden. The topsoil whatever generated had been stacked separately and promised that, later it would be used for reclamation purpose and for road formation & filling of the ground & the remaining waste material will be used for filling of mined out void.*

*The management of storm water is managed exceptionally well. The drainage from the site is provided with three small check dams to clarify the drained water before collecting which is used at the site. Moreover they had provided slope stabilisation by using coir mats and local grass which are maintained remarkably in good condition.*

*Minimum & Maximum depth of mining is 5m & 110 m respectively.*

*The quarry is a well maintained site with sign boards all around the area and fencing provided adequately. The site area is maintained aesthetically very well.*

***Recommendation***

*It is recommended to give EC for the application after stipulating general conditions for a quarry project*

3. The proposal was placed in the 69<sup>th</sup> meeting of SEAC, Kerala, held on 09<sup>th</sup> & 10<sup>th</sup> March, 2017 and decided to defer the item for submission of the proof for having applied for Wild Life Clearance.

Subsequently, the proponent has submitted the proof having applied for Wild Life Clearance.

4. The proposal was considered in the 72<sup>nd</sup> meeting of SEAC held on 8<sup>th</sup> and 9<sup>th</sup> May 2017. The Committee verified the documents submitted by the proponent and found satisfactory. Based on the Mining plan, Form1, all other documents submitted with the proposal, the field visit report and also after examining the complaint received the committee decided to Recommend for issuance of EC subject to general conditions in addition to the following specific condition.

1. *If any plant species endemic to Western Ghats are noticed in the area they shall be properly protected in situ or by transplanting to an appropriate location inside the lease area.*

The proponent agreed to set apart Rs.15 lakh (non-recurring) and Rs.15 lakh per annum (recurring) for CSR activities for the welfare of the local community in consultation with the local Panchayat.

5. The proposal was considered in the 71<sup>st</sup> meeting of SEIAA held on 20<sup>th</sup> July 2017. Authority accepted the recommendation of SEAC and decided to ascertain whether there is violation, if the quarry was working on permit after 2016. A report from the District Geologist should be obtained in this regard within one month after conducting site visit. EC is recommended after this subject to general condition in addition to the following specific condition.

1. *If any plant species endemic to Western Ghats are noticed in the area they shall be properly protected in situ or by transplanting to an appropriate location inside the lease area.*

The proponent should set apart Rs.15 lakh (non-recurring) and Rs.15 lakh per annum (recurring) for CSR activities for the welfare of the local community in consultation with the local Panchayat. A notarised affidavit for the commitment of CSR activities and agreeing all the general and specific conditions should be submitted before the issuance of EC. A report of the District Geologist's vide letter No.DOC/M-2119/2017 dated 13.09.2017 received in SEIAA has stated that no quarrying operation was carried out in proposed area. The proponent has submitted an affidavit vide reference 6<sup>th</sup> cited, satisfying all the above conditions

6. Environmental clearance as per the EIA notification 2006 is hereby accorded for the proposed building stone quarry project of Shri. Shaju Jose, M/s Payyavoor Crushers,

Payyavoor Village, Thaliparamba Taluk, Kannur District Kerala State for an area of 2.85 Ha, in Sy No. 1/1 of Payyavoor Village, Thaliparamba Taluk Kannur District subject to the specific conditions as recommended by SEAC in para 4<sup>th</sup> 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.

7. 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 Chapter 4 (Mining), Chapter 5 (Blasting), Chapter 11 (EMP) Chapter 12 (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.
8. 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.
9. 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, Kannur to take legal action under the Environment (Protection) Act 1986.
  - iii. The given address for correspondence with the authorised signatory of the project is Shri.Shaju Jose , Payyavoor Crusher .Payyavoor Village,Thaliparamba Taluk, Kannur District, Kerala – 670 633

Sd/-

**JAMES VARGHESE.I.A.S,**  
**Member Secretary (SEIAA)**

To,

Shri.Shaju Jose,M/s Payyavoor Crushers  
Payyavoor Village,  
Thaliparamba Taluk,  
Kannur District  
Kerala – 670 633

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 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
5. The District Collector, Kannur
6. The District Geologist, Kannur
7. The Tehsildhar, Thaliparamba 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 proponents shall apply and get the approval of this Authority.
33. The Authority reserves the right to add additional safeguard measures subsequently, if found necessary, and to take action including revoking of the environment clearance under the provisions of the Environment (Protection) Act, 1986, to ensure effective implementation of the suggested safeguard measures in a time bound and satisfactory manner.
34. The stipulations by Statutory Authorities under different Acts and Notifications should be complied with, including the provisions of Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and control of Pollution) act 1981, the Environment (Protection) Act, 1986, the Public Liability (Insurance) Act, 1991 and EIA Notification, 2006.
35. The project proponent should advertise in at least two local newspapers widely circulated in the region, one of which (both the advertisement and the newspaper) shall be in the vernacular language informing that the project has been accorded Environmental Clearance and copies of clearance letters are available with the State Environment Impact Assessment Authority (SEIAA) office and may also be seen on the website of the Authority at [www.seiaakerala.org](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.
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<sub>10</sub> and PM<sub>2.5</sub> 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 thisimplementation 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

