



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 Proposed quarry project in Sy. Nos. 166/2, 166/2-6, 166/2-7, 166/2-9, 166/2-10 at Koodal Village, Adoor Taluk, Pathanamthitta District, Kerala of Mr.P.J.Jacob - Granted – Orders issued.

STATE ENVIRONMENTAL IMPACT ASSESSMENT AUTHORITY, KERALA

No 912/SEIAA/EC4/3648/2015

Dated, Thiruvananthapuram, 10.10.2017

- Ref:
1. Application received on 10-09-2015 from Mr P.J.Jacob, Director, M/S Inchappara Sands & Granites Pvt. Ltd., House No. 529/XV, Jobin Villa, Kallumkadavu, Pathanapuram Muri, Pathanapuram (Village and Taluk), District-Kollam-689695.
 2. Minutes of the 56th meeting of SEAC held on 06th & 07th June, 2016.
 3. Minutes of the 62nd meeting of SEAC held on 06th & 07th September, 2016.
 4. Minutes of the 67th Meeting of SEAC held on 27th January 2017.
 5. Minutes of the 69th Meeting of SEAC held on 09th and 10th March 2017.
 6. Minutes of the 72nd Meeting of SEAC held on 08th and 09th May 2017.
 7. Minutes of the 71st Meeting of SEIAA held on 20th July 2017.
 8. Affidavit received dated 29.08.2017 from Mr P.J.Jacob, Director, M/S Inchappara Sands & Granites Pvt. Ltd.

ENVIRONMENTAL CLEARANCE NO. 70/2017

Mr P.J.Jacob, Director, M/S Inchappara Sands & Granites Pvt. Ltd, House No. 529/XV, Jobin Villa, Kallumkadavu, Pathanapuram Muri, Pathanapuram (Village and Taluk), District-Kollam-689695, vide his application received on 10-09-2015 has sought Environmental Clearance under EIA Notification, 2006 for the proposed quarry project in Sy. Nos. 166/2, 166/2-6, 166/2-7, 166/2-9, 166/2-10 at Koodal Village, Adoor Taluk, Pathanamthitta District, Kerala for an area of 4.648 hectares. The project comes under Category B, Activity 1(a), (i) as per the Schedule of EIA Notification 2006 (since it is below 50hectares) and as per O.M. No. L-11011/47/2011-IA.II (M) dated 18th May 2012 of Ministry of Environment and Forests. The project 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. The proposed project site falls Latitude 9° 9'26.22" N to 9° 9'16.60" N 9° 9'22.47" N to 9° 9'17.93" N Longitude 76°51'34.03" E to 76°51'50.68" E, 76°51'30.80" E to 76°51'51.80" E. The proposed project area is not adjacent to any of the ecologically sensitive features like National parks, Biospheres Reserves, sanctuaries, elephant

Corridors, Tiger reserves, flight paths of migrating fauna, etc. The project area does not fall into ESZ – I of WGEEP Report and ESA of HLWG.

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

BASIC INFORMATION OF QUARRY

Project details						
1.	File No.	912/SEIAA/EC4/3648/2015				
2.	Name /Title of the project	GRANITE (BUILDING STONE) QUARRY				
3.	Name and address of project proponent.	M/s. Inchappara Sand & Granite Pvt. Ltd House no. 529/XV, Jobin villa, Kallumkadavu, Pathanapuram Post, Kollam District, Kerala , Pin-689695 Phone No.: 0484-2332171, 2347141(Fax) Email- inchapparasand@gmail.com				
4.	Owner of the land	Non-forest private land. Applicant has obtained consent from land owners to extract Granite from the area. 1.Peegreen aggregates &sands pvt ltd 2.Inchapara sand and granites Pvt ltd				
5.	Survey No. District/Taluk/ and Village etc.	Survey No. 166/2, 166/2-6, 166/2-7, 166/2-9, 166/2-10 at Village - Koodal, Taluk - Adoor, District- Pathanamthitta, Kerala				
6.	Details of period of lease or permit with number including the beginning and expiry date of lease/permit period (Copy to be attached)	Lease details				
		Sr. No.	Survey No.	DGM Order with Date of grant	Valid upto	Area (In Ha)
		1	166/2	No. 463/ 2011-12/ 5629 /M3 /2011 dated 20.10.2011	23.10.2023	1.4810
		2.	166/2-6	No. 464/ 2011-12/ 5634 /M3 /2011 dated 20.10.2011	23.10.2023	1.0806
		3.	166/2-7	No. 901/ 2011-12/ 9936 / M3 / 2011 dated 19.03.2012	1.05.2022	0.2612
		4.	166/2-9			0.8005

		5.	166/2-10	No. 8341/2011-12/9938 /M3/2011 dated 8.02.2012	1.05.2017	1.0248	
		Total					4.648
Copy enclosed as Annexure I.							
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?	Working of the quarry has not yet commenced. Not Working N.A					
8.	Date of submission of Application	10-09-2015					
9.	Brief description of the project.	The Granite (Building Stone) Quarry is situated at Survey No. 166/2, 166/2-6, 166/2-7, 166/2-9, 1 66/2-10 at Village - Koodal, Taluk- Adoor, District - Pathanamthitta, Kerala, covering an area of 4.684 Ha. Geological Reserves: 37,86,811 tonnes Mineable Reserves: 12,74,947 tonnes Looking to the present demand of the minor mineral the permit holder desires to operate the mine with production capacity of 1, 50, 000 tons per year. The mine will be worked by opencast semi mechanized method, using jack hammer drill & blasting, benches of 5m x 5m will be formed. To maintain bench height of 5 meters drilling & blasting in 2 phases of 2.5m will be done. Transportation of the material will be done through tipper/trucks of the end users; Route will depend upon the site of the user. Most of the deposit is covered with soil cover of 1.0 m to 1.5 m in thickness wherein big boulders of granites are also embedded. The O.B will be removed & stacked within the lease area adjoining to quarry (in survey no 166/1) earmarked for the purposes.					
10.	Details of Authorized Signatory and address for correspondence	Mr. P.J. Jacob Managing Director Ward No. XV, House no.529, Jobin Villa, Kallumkadavu, Pathanapuram,					

		Kerala- 689 695 Email: inchapparasand@gmail.com Phone: 0484-2332171, 9744555544 (M)
Land Details		
11.	Extent of area in hectares	4.648 Ha
12.	Is the property forest land/Govt. land/own land/patta land	Own land (Private land). Consent obtained from land owners for granite quarry.
13.	Quantity of top soil/over burden produced and managed	17,116 m ³ of Top soil and 27,938 tons of waste will be generated during life of the mine, it will be kept in the area earmarked for the same. The waste will be used to backfill the part of quarry pit, and soil will be spread over the back filled area; the reclaimed area will be used for Rubber plantation.
14.	Latitude and Longitude	The area lies between Latitude: 9° 9'26.22" N to 9° 9'16.60" N 9° 9'22.47" N to 9° 9'17.93" N; and Longitude: 76°51'34.03" E to 76°51'50.68" E 76°51'30.80" E to 76°51'51.80" E .
15.	Topography of land and elevation	Topographically the proposed area is hilly terrain, having highest elevation of 215 MRL and the lowest elevation is of 112 MRL. General Ground level is at 100 MRL. The drainage of the area is controlled by seasonal channels along the hill slope towards North.
16.	Slope analysis	Mining will be carried out along the hill slope. Bench height and width will be maintained at 5m x 5 m to maintain overall pit slope of 45°.
17.	Will there be any significant land disturbance resulting in soil erosion, subsidence & natural drainage.	There will be excavation of granite rock from mining lease area only. No disturbance is envisaged to area outside the mine lease. Subsidence is not envisaged as mining will be carried out by opencast method. Storm water drains will be constructed along the mine lease boundary to divert storm water run-off from the area outside mine lease. There is no perennial stream passing through the mine lease area. Also, Development of green belt and other forms of greenery shall also prevent soil erosion and washing away of topsoil.

18.	Access road to the site width and condition	Site is accessible by metal tarred road having 7 m width. The nearest town Koodal is about 2.15 kms in SSW direction.
19.	Will there be any adverse impact on the aesthetics of the proposal site	Excavation for granite mining will cause removal of existing vegetation and creation of mine pits. However, plantation of greenbelt on safety zone and on mined out benches will improve the aesthetics of the area in conceptual stage of mining. Also, a water reservoir will be developed in the pit bottom.
Mining details		
20.	Minimum and Maximum height of excavation.	Highest elevation : 215 MRL Lowest elevation: 112 MRL. Ultimate pit depth: 105 MRL
21.	Life of mine proposed.	10 years
22.	Underground mining if any proposed	None.
23.	Method of Mining	Mechanized opencast method of mining
24.	Distance from the adjacent quarry	100 m
25.	Cluster condition if any	There are five other small quarries within 500 m radius with a total area of 1.5159 Ha. Most of these quarries are non-operational and hence cluster condition does not arise.(Certificate from geologist already submitted).
26.	Has "No cluster certificate" submitted?	Certificate from geologist of 500 m radius quarries has been submitted.
27.	Distance from nearby habitation	Murinjal: 1.22 km WSW Koodal: 2.15 km SSW
28.	Distance from nearby forest, if applicable	Konni Reserve Forest – 31.66 km- E Thenmala Reserve forest- 34.98 km- SE
29.	Distance from protected area, Wildlife Sanctuary, National Park etc.	None within 10 km radius from Mine Lease Area
30.	Distance from nearby streams/rivers/National Highway and Roads	Seasonal water Bodies available at a distance of 600 m from mining lease area. State Highway (SH- 8) : 0.5 Km- NNE
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	1, 50, 000 tons per year Granite (Building Stone)	
34.	Details of mining process	<p>Geological Reserves: 37,86,811 tonnes Mineable Reserves: 12,74,947 tonnes Looking to the present demand of the minor mineral the permit holder desires to operate the mine with production capacity of 1, 50, 000 tons per year. The mine will be worked by opencast semi mechanized method, using jack hammer drill & blasting, benches of 5m x 5m will be formed. To maintain bench height of 5 meters drilling & blasting in 2 phases of 2.5m will be done. Transportation of the material will be done through tipper/trucks of the end users; Route will depend upon the site of the user. Most of the deposit is covered with soil cover of 1.0 m to 1.5 m in thickness wherein big boulders of granites are also embedded. The O.B will be removed & stacked within the lease area adjoining to quarry (in survey no 166/1) earmarked for the purposes.</p>	
Details of Project cost			
35.	Land cost	Rs 2.00 crore	
36.	Plant and Machinery	Rs 1.00 crore	
37.	Total Cost	Rs. 3.0 Crore	
38.	Financial Statement including funding source and details of insurance etc.	All funds are sourced by the project proponent.	
39.	Management Plan	Air Pollution	Water sprinkling on haul roads, plantation of greenbelt, laying of standard haul roads, wet drilling practices, proper blast design, covered transportation of rock, restriction on overloading and over speeding, regular air quality monitoring.
		Water Pollution	Construction of garland drain to divert storm water from outside the mine lease area, construction of settling ponds / tanks, no process effluent will be discharged outside mine lease. Plantation of green belt to control soil erosion. Periodic monitoring of surface and ground water quality
		Noise	Periodic maintenance of mine machinery, Use of PPE's, Plantation of green belt, periodic audiometric

			tests of workers, Noise monitoring, training and awareness to workers.
		Solid Waste Management	17,116 m ³ of Top soil and 27,938 tons of waste will be generated during life of the mine, it will be kept in the area earmarked for the same. The waste will be used to backfill the part of quarry pit, and soil will be spread over the back filled area; the reclaimed area will be used for Rubber plantation.
		Eco-restoration	As the mining lease area is hilly terrain and it belongs to private individuals, the mined out land will be used for commercial plantation. The proponent has decided to plant the rubber trees in the area which will serve the purpose of green belt development as well as it will have commercial value also.
40.	Whether Environment Management Plan or Eco restoration Plan satisfactory?	Yes	
41.	Does it suggest mitigation measures for each activity	Yes	
42.	If Pre-Feasibility Report (PFR) satisfactory	Yes	
43.	Does it need public hearing	No	
44.	Details of litigation and Court verdict if any	There is no litigation pending or court verdict against the project.	
45.	Details of public complaint, if any	None	
46.	Details of statutory sanction required	Environmental clearance, Establish/Operate, D& O License.	Consent to
47.	If CRZ recommendation applicable?	Not applicable.	
PART B			
Environment Impact Assessment and Mitigation Measures			
Impact on water			
48.	Details of water requirement per day in KLD	5 KLD	
49.	Water source/sources.	Nearby well. Mine pit water (when available) for dust	

		suppression and plantation
50.	Expected water use per day in KLD.	5 KLD
51.	Details of water requirements met from water harvesting.	Rainwater accumulated in mine pit will be used for dust suppression and plantation.
52.	What are the impact of the proposal on the ground water?	Small quantity of water will be required. No significant impact on ground water. Mining activities will remain above ground water table.
53.	How much of the water requirement can be met from the recycling of treated waste water? (Facilities for liquid waste treatment)	There is no process effluent generation. Storm water during monsoon will be collected in settling ponds and only properly settled water will be discharged outside. Only small quantity of domestic effluent will be generated from toilets. No proposal for treatment of domestic effluent.
54.	What is the incremental pollution load from waste water generated from the proposed activities?	There is no effluent discharge proposed from the project. Domestic effluent will be discharged in septic tank and soak pit system. No incremental pollution load is envisaged.
55.	How is the storm water from within the site managed?	Garland drains will be constructed along the lease boundary and the storm water will be collected in settling ponds / tanks for settling before finally discharging outside.
Impact on Biodiversity and Eco restoration Programmes		
56.	Will the project involve extensive clearing or modification of vegetation (Provide details)	The applied lease area is covered mostly with horticulture (mainly Rubber & Coconut plantation). Existing vegetation will have to be cleared from area proposed for mining.
57.	What are the measures proposed to minimize the likely impact on vegetation (details of proposal for tree plantation/ landscaping)	Existing vegetation will be removed only when mining is immediately proposed in the area. Dense plantation will be taken up on the mined out benches of the quarry. Greenbelt plantation will be done around the mine lease boundary. Around 1247 saplings will be planted in the mine lease area of 4.648 Ha.
58.	Is there any displacement of fauna – both terrestrial and aquatic. – If so what are the mitigation measures ? Presence of any endangered species or red listed category (in detail)	None. The area is covered by sparse horticulture plantation and there is no habitat for any wild fauna due to frequent human activities in the area. None.
Impact on Air Environment		
59.	What are the mitigation measures on generation of dust, smoke and air quality	<ul style="list-style-type: none"> • Regular water sprinkling on haul roads, • plantation of greenbelt around lease boundary, • laying of standard haul roads,

		<ul style="list-style-type: none"> wet drilling practices, proper blast design, covered transportation of rock, restriction on overloading and overspeeding, regular air quality monitoring.
60.	Details of internal traffic management of the site.	<ul style="list-style-type: none"> Haul roads will be scientifically designed for long life and less dust generation. Vehicle speed will be restricted to 10 kmph within the lease area. Sufficient parking space will be provided for the vehicles. Road width will be maintained sufficient for easy plying of incoming and outgoing vehicles. Periodic maintenance of transportation vehicles will be ensured.
61.	Details of noise from traffic, machines and vibrator and mitigation measures	<ul style="list-style-type: none"> Periodic maintenance of mine machinery, Use of PPE's, training and awareness to workers. Plantation of green belt, periodic audiometric tests of workers, periodic Noise monitoring.
62.	Impact of DG sets and other equipments on noise and vibration and ambient air quality around the project site and mitigation measures	<ul style="list-style-type: none"> Suitable acoustic enclosure / mufflers will be provided to the noisy machines. Periodic maintenance of mine machinery Mine operations will be carried out during day time only.
63.	Air quality monitoring in detail	Periodic Ambient air quality for PM10, PM2.5, SO ₂ , NO _x & CO will be carried out at mine site and at nearby village habitation. Results will be compared with applicable National Standards. Reports will be submitted to KSPCB/MOEF.
Energy Conservation		
64.	Details of power requirement and source of supply.	All the mine machinery will be Diesel / Compressed air operated. Diesel will be obtained from nearby petrol pump. Electricity will be required only for site office & street lighting. Electricity will be obtained from State Grid.
65.	Details of renewable energy (non – conventional) used.	None
Risk Management		
66.	Are there sufficient measures proposed for risk hazards in case of emergency such as accident at the site?	Occupational Health & Safety measures: <ul style="list-style-type: none"> To depute dedicated safety team Inspection and maintenance of equipments and accessories Pre placement and periodic health check up

		<ul style="list-style-type: none"> • Removal of unsafe conditions and prevention of unsafe acts • Detailed analysis of each and every incident • To provide standard PPEs and ensure its uses • Medical facilities & first aid boxes will be established in the mine premises. 																		
67.	<p>Are proposals for fencing around the quarry satisfactory?</p> <p>Storage of explosives/hazardous substance in detail</p> <p>Facility for solid waste management</p>	<ul style="list-style-type: none"> • The mining area will be properly fenced. • Project proponent will obtain licence for storage of explosive and then explosives will be stored in licensed explosive magazine. Till that time, blasting will be outsourced to authorised agency. • 17,116 m³ of Top soil and 27,938 tons of waste will be generated during life of the mine, it will be kept in the area earmarked for the same. The waste will be used to backfill the part of quarry pit, and soil will be spread over the back filled area; the reclaimed area will be used for Rubber plantation. 																		
Socio Economic Impacts																				
68.	<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>Applied area is private own land and the project proponent has obtained consent for stone quarrying from the land owners. There are no sacred sites, or cultural important site in the proposed area.</p>																		
69.	<p>Will the proposal result in any changes to the demographic structure of local population. If so, provide details.</p>	<p>None. Most of the mine workers will come from nearby villages. Proposed CSR activities by the project proponent will benefit the local people.</p>																		
70.	<p>Are the CSR proposals satisfactory. Give details</p>	<table border="1"> <tr> <td colspan="3">Common CSR Activities already carried out</td></tr> <tr> <td colspan="3">Not applicable</td></tr> <tr> <td colspan="3">Proposed CSR Activities</td></tr> <tr> <td>Sl.No</td><td>Particulars</td><td>Amount in Rs.in lakhs</td></tr> <tr> <td>1.</td><td>Maintenance of Inchapara-Athirumkal Road (8 metre Panchayat Road-Approx. 500 meter)Yearly</td><td>1.00</td></tr> <tr> <td>2.</td><td>Donation to Primary health centre,KoodalVillage (yearly) (For purchase of wheel chairs and</td><td>0.50</td></tr> </table>	Common CSR Activities already carried out			Not applicable			Proposed CSR Activities			Sl.No	Particulars	Amount in Rs.in lakhs	1.	Maintenance of Inchapara-Athirumkal Road (8 metre Panchayat Road-Approx. 500 meter)Yearly	1.00	2.	Donation to Primary health centre,KoodalVillage (yearly) (For purchase of wheel chairs and	0.50
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2.	Donation to Primary health centre,KoodalVillage (yearly) (For purchase of wheel chairs and	0.50																		

			construction of toilets)	
		3.	Medical Insurance to Harijan Settlement Colony, Athirumkal-Koodal village(For 20 families)	1.00
		4.	Donation to kalanjoor Grama panchayat kayika Pariseelana Padathi (Yearly)	0.50
		5.	Donation to SreeNarayana UP school-Educational Institute(Yearly)-koodal Village (For construction/ Maintenance of toilet facilities)	0.50
		6.	Donation to Govt Vocational higher secondary School Kalanjoor Panchayat (Yearly) (Amount will be used to purchase school bags, books etc to poor children)	0.50
		7.	Construction/Maintenance of Bus waiting Shelter At Inchapara bus stop (Yearly)	1.00
			Total	5.00
71.	What are the projects benefits in terms of employment potential?	About 20 persons will get direct employment in the project and more than 50 persons will be indirectly benefitted through secondary employment such as mineral transport, garages, restaurants, shops, etc.		
PART C				
72.	Details of NABET approved EIA Consultant engaged- Their name, address and accreditation details	OVERSEAS MIN-TECH CONSULTANTS 501,5TH FLOOR,APEX TOWER,TONK ROAD, JAIPUR-302015 QCI/NABET Accredited EIA Consultant Certificate No:NABET/EIA/1417/IA003		
Summary and Conclusion				
73.	Overall justification for implementation of the project.	The proposed project is not likely to cause any significant impact on the ecology of the area, as adequate preventive measures will be adopted to contain the various pollutants within permissible limits. Green belt development around the area will be taken up as an effective pollution mitigative technique, as well as to control the pollutants released from the premises of M/s. Inchappara sand & Granit Pvt. Ltd. and will develop the green belt as per the programme to improve aesthetic beauty of the area. The mining area will be developed into a Rubber plantation area in post mining phase. The CSR activities will benefit the local population. Hence, the project is suitable for implementation.		

74.	Explanation of how adverse impact have been mitigated.	<p>There is no significant adverse impacts envisaged due to the proposed stone quarry project. Adequate air pollution control measures such as periodic water sprinkling for dust suppression, green belt plantation for dust attenuation will be carried out. Regular ambient air quality will be monitored at mine site and in nearby habitation.</p> <p>Periodic maintenance of mine machinery and transport vehicles will be carried out to control noise within permissible limits. Ear muffs/plugs will be provided to workers exposed to high noise generating operations. Controlled blasting technique will be adopted to control ground vibrations.</p> <p>Garland drains will be constructed around the mine lease boundary to divert storm water run-off and the water will be collected in settling pond for proper settling before discharge. No process effluent will be generated in the mine. Domestic effluent will be discharged in septic tank and soak pit system.</p> <p>Thick plantation will be carried out on the mined out benches to restore aesthetics of the area.</p> <p>Adequate occupational safety & health measures will be adopted to minimise risks from accidents / hazards.</p> <p>CSR activities will be carried out in the nearby villages to benefit local people.</p> <p>Thus, all the anticipated adverse impacts will be taken care of during planning and implementation stage and there will not be any adverse impact during the mine operations.</p>
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2. The proposal was considered in the 56th SEAC meeting held on 06th & 07th June, 2016. Further to the intimation of SEAC, the proponent along with the RQP attended the meeting and the RQP made a brief power-point presentation. The Committee appraised the proposal based on Form I, Pre-feasibility report, Mining Plan. The committee observed that the proponent has submitted Mining Plan as per KMMC Rule 1967. Hence deferred the item for submission of revised mining plan as per KMMC Rule 2015.

As the proponent submitted the mining plan as per Kerala Minor Mineral Concession Rule on 06/08/2016 the proposal was again considered in 62nd meeting of SEAC held on 06th & 07th September, 2016. The committee appraised the proposal based on the mining plan, pre-feasibility report and all other documents submitted along with the form 1 application and decided to defer the item for field visit.

The field visit report has received from the subcommittee and is as furnished below:-

'Field visit to the Quarry project site of M/s Inchappara Sand & Granites Pvt. Ltd, Koodal Village, Pathanamthitta district, was carried out on 03.12.2016 by the sub-committee of SEAC, Kerala, comprising Dr.Keshav Mohan and Sri. John Mathai. Representative of the proponent was present at the site at the time of site visit.

The project is located at about half a km east of Inchappara on the Pathanapuram-Konni road. The area almost entirely falls within a rubber plantation. Traverses were taken within the plantation area, but the representative of the proponent could not show the precise area for which mine plan has been made. In the absence of boundary pillars or fence or even a cleared separation between the plantation and quarry lease area, an assessment of the area could not be made. Hence another visit is required to the site. The proponent may be informed to delineate the precise quarry lease area with permanent boundary pillars. The coordinates of each pillar with its number as in mine plan should be marked on them for identification.'

3. The proposal was considered in the 67th meeting of SEAC, Kerala, held on 27th January, 2017. The Committee appraised the proposal based on Form I, Pre-feasibility Report, Mining Plan, field inspection report of the Sub Committee and all other documents submitted with the proposal. The Committee decided to **defer the item for a second field visit** as during the first visit the proponent could not identify the precise area proposed for mining. Hence before the next site visit the proponent shall properly delineate the area proposed for the lease.

Subsequently, field visit to the Quarry project site of M/s Inchappara Sand & Granites Pvt. Ltd, Koodal Village, Pathanamthitta district, was carried out again on 25.02.2017 by the sub-committee of SEAC, Kerala, comprising Dr.Keshav Mohan and Sri. John Mathai. The proponent and his representatives were present at the site at the time of site visit.

The project is located at about half a km east of Inchappara on the Pathanapuram-Konni road. The area almost entirely falls within a rubber plantation that belongs to the Proponent. The general slope is moderate to steep towards south. Northern boundary of the area is Govt. Land exposing hard rock. The proposed quarry lease area falling in Sy No 166/2 can be divided into two blocks: Block A covering an area of 1.481 ha and block B covering an area of 3.1671 ha, but separated by a distance of 130 m. The area is yet to be fenced but boundary pillars are in place. The GPS coordinates of the boundary pillars are displayed at the site; the values of few of them were verified. Approach road is yet to be formed. Though other quarries are seen within 500 m, cluster situation does not arise as the combined area is less than 25 ha. On the eastern part of the lease area a faint stream channel is seen. Many dwelling units are seen on the southern valley part, but not clear whether they are within 100 m.

Following clarifications may be sought before recommending for EC.

1. *The pre-feasibility report/ approved mining plan are provided with maps in which the coordinates are given as Eastings and Northing and not as Latitude and Longitude. The GPS coordinates of all the boundary pillars should be provided as Latitude and Longitude.*
2. *The 500 m vicinity map showing all the dwelling units, adjacent quarries and other cultural features is not provided. The measured distance from all the buildings to the lease boundary should be given in the map.*
3. *A stream channel seen on the eastern side is to be treated such that the storm water is clarified and the flow arrested through check dams before water is let out of the premises.*
4. *Provision for catch water drains, RWH etc. are not shown in the plan.*
5. *Storage location of OB and top soil is to be indicated in the plan. The mine closure plan given lacks clarity.*
6. *Considering the fact that the site is divided into two blocks with more than 100 m separation, the approach road of block B is through block A and that the development of block A is planned after only 5 years, EC may be considered presently for block B alone.*

4. The proposal was placed in the 69th meeting of SEAC held on 09th & 10th March 2017. The proponent asked for Environmental clearance for 5 ha covering two different blocks having an area of 1.481 ha and 3.1671 ha. In the field inspection report, the Sub Committee has pointed the separation of these two blocks for more than 100 m. Therefore the Committee decided to ask the proponent to submit a revised Mining Plan for a contiguous area of 5 ha or limit the mining to one of the blocks. The proponent intimated that he will limit the mining to Block B of area 3.1671 ha.

5. The proposal was considered in the 72nd meeting of SEAC held on 8th and 9th May 2017. The Committee appraised the proposal based on Form I, Pre-feasibility Report, Mining Plan, field inspection report of the Sub Committee and all other documents submitted with the proposal. The Committee decided to **Recommend for issuance of EC** subject to general conditions in addition to the following specific condition for mining.

1. *Mining operations to be confined to block B of 3.1671 hectares.*
2. *A stream channel seen on the eastern side is to be treated such that the storm water is clarified and the flow arrested through check dams before water is let out of the premises.*
3. *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.*

SEIAA may insist for a commitment from the proponent to set apart Rs.5 lakh (non-recurring) and Rs.5 lakh per annum (recurring) for CSR activities for the welfare of the local community in consultation with the local Panchayat.

6. The matter was placed in the 71st meeting of SEIAA held on 20.07.2017. The Authority accepted the recommendation of SEAC and decided to issue EC subject to general condition in addition to the following specific conditions.

- i) Mining operations to be confined to block B of 3.1671 hectares.*
- ii) A stream channel seen on the eastern side is to be treated such that the storm water is clarified and the flow arrested through check dams before water is let out of the premises.*
- iii) 100 m buffer distance should be left from the dwelling unit.*
- iv) Fencing around the quarry should be done and a good approach road should be formed as reported by the Inspection Team.*
- v) 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 an amount of Rs.5 lakh (non-recurring) and Rs.5 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.

7. The proponent has submitted an affidavit vide reference 8th cited, satisfying all the above conditions. Environmental clearance as per the EIA notification 2006 is hereby accorded for the proposed building stone quarry project in Survey No. 166/2, 166/2-6, 166/2-7, 166/2-9, 166/2-10 at Village - Koodal, Taluk- Adoor, District - Pathanamthitta, Kerala, by Mr P.J.Jacob, Director, M/S Inchappara Sands & Granites Pvt. Ltd, Pathanapuram, Kollam District, Kerala State -689695 for an area of 3.1671 ha (Block B), subject to the specific conditions as recommended in para 6 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.

8. 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 6 (Mine Drainage), Chapter 7 (Stacking of Mineral rejects and Disposal of waste) Chapter 11 (EMP) Chapter 12 (Progressive Mine Closure Plan) of the Mining Planas

submitted will be deemed to be part of this proceedings as conditions as undertaken by the proponent, as if incorporated herein.

9. 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.

10. 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, Pathanamthitta to take legal action under the Environment (Protection) Act 1986.
- iii. The given address for correspondence with the authorised signatory of the project is Mr P.J.Jacob, Director, M/S Inchappara Sands & Granites Pvt. Ltd., House No. 529/XV, Jobin Villa, Kallumkadavu, PathanapuramMuri, Pathanapuram (Village and Taluk), District-Kollam-689695.

Sd/-

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

To,

Mr P.J.Jacob,
Director, M/S Inchappara Sands & Granites Pvt. Ltd.,
House No. 529/XV, Jobin Villa, Kallumkadavu,
PathanapuramMuri, Pathanapuram,
District-Kollam-689695.

Copy to,

1. MoEF Regional Office, Southern Zone, Kendriya Sadan, 4th Floor, E&F Wing, II Block, Koramangala, Bangalore-560034.
2. The Additional Chief Secretary to Government, Environment Department, Government of Kerala.
3. The Director, Mining & Geology, Thiruvananthapuram -4.
4. The Member Secretary, Kerala State Pollution Control Board
5. The District Collector, Pathanamthitta
6. The District Geologist, Pathanamthitta
7. The Tahasildar, Adoor Taluk, Pathanamthitta District, Kerala
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. 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 PM₁₀ and PM_{2.5} such as haul Road, loading and unloading points and transfer points – it shall be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central Pollution Control Board in this regard.
46. Fugitive dust emissions from all the sources should be controlled regularly. Water spraying arrangement on haul roads, loading and unloading and at transfer points should be provided and properly maintained.
47. Measures should be taken for control of noise levels below 85 dBA in the work environment.
48. A separate environmental management cell with suitable qualified personnel should be set-up under the control of a Senior Executive, who will report directly to the Head of the Organization.
49. The funds earmarked for environmental protection measures and CSR activate should be kept in separate account and should not be diverted for other purpose. Year wise expenditure should be reported to the State Environment Impact Assessment Authority (SEIAA) office.
50. The Regional Office of MOEF & CC located at Bangalore shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (S) of the Regional Office by furnishing the requisite data/information/monitoring reports.
51. Any appeal against this Environmental Clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.
52. Concealing the factual data or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of Environment (Protection) Act, 1986.
53. The SEIAA may revoke or suspend the order, for non implementation of any of the specific or this implementation of any of the above conditions is not satisfactory. The SEIAA reserves the right to alter/modify the above conditions or stipulate any further condition in the interest of environment protection.
54. The above conditions shall prevail notwithstanding anything to the contrary, in consistent, or simplified, contained in any other permit, license on consent given by any other authority for the same project.
55. This order is valid for a period of 5 years or the expiry date of mine lease period issued by the Government of Kerala, whichever is earlier.
56. The Environmental Clearance will be subject to the final order of the courts in any pending litigation related to the land or project in any court of law.
57. The mining operation shall be restricted to above ground water table and it should not intersect ground water table.
58. All vehicles used for transportation and within the mines shall have 'PUC' certificate from authorized pollution testing 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

