

Proceedings of the District Environment Impact Assessment Authority (DEIAA), Ernakulam
(Present. Sri. Muhammed Y Safirulla. IAS, District Collector & Chairman DEIAA, Sri. Snehil Kumar
Singh. IAS, Member Secretary, DEIAA & Sub Collector, Fort Kochi, Sri. A. Renjan I.F.S, DFO
Malayattoor & Member DEIAA, Dr. P.S. Easa, Member National board for Wildlife & Member DEIAA.)

Environmental Clearance No.60/2018
Building Stone Quarry (68)

No. P/333/2018
DIA/KL/MIN/12528/2018

Ernakulam.
Dated.10/12/2018

Sub: - DEIAA Ernakulam – meeting held on 05/11/2018 – Environmental clearance for
excavation of Granite Building Stone – Orders issued

- Ref: - 1. Minutes of the meeting of 21st DEIAA held on 05/11/2018 at Chamber of District
Collector, Ernakulam.
2. Minutes of the meeting of 20th DEAC held on 06/04/2018.
3. Minutes of the meeting of 21st DEAC held on 03/05/2018.
4. Application filed by Sri Sabu Varghese, M/s S.S. Granites, Korangolithadathil
House, Karimpana P.O., Koothattukulam, Ernakulam , Kerala.

Sri Sabu Varghese, M/s S.S. Granites, Korangolithadathil House, Karimpana P.O.,
Koothattukulam, Ernakulam , Kerala filed an application for an Environment Clearance for Mining of
Granite Building Stone from the Survey Nos. 441/4-1, 441/5, 455/6A, 457/3-1, 457/4-2, 457/4-3, 457/5,
459/2A3 & 459/2B2 in Palakkuzha Village, Muvattupuzha Taluk. The total area of land is 4.3046 hectares
and the capacity of the Mining is ROM 2, 03,750 TPA (Salable 1, 93,562 TPA).

THE DETAILS AS MENTIONED IN FORM 1M(APPENDIX VIII) OF THE APPLICATION.

1	Proposal No.	DIA/KL/MIN/ 12528 /2018		
2	Name of Mining Lease Site	Building Stone Quarry of M/s S.S. GRANITES.		
3	Location / site (GPS Co-ordinates)	B.P.No	Latitude	Longitude
		01	N : 09° 54' 6.85"	E : 76° 35' 47.83"
		02	N : 09° 54' 5.97"	E : 76° 35' 47.60"
		03	N : 09° 54' 4.53"	E : 76° 35' 49.33"
		04	N : 09° 54' 5.76"	E : 76° 35' 50.62"
		05	N : 09° 54' 5.33"	E : 76° 35' 51.43"
		06	N : 09° 54' 4.74"	E : 76° 35' 52.61"
		07	N : 09° 54' 4.12"	E : 76° 35' 53.69"
		08	N : 09° 54' 3.96 "	E : 76° 35' 53.56"
		09	N : 09° 54' 2.87"	E : 76° 35' 56.15"
		10	N : 09° 54' 0.89 "	E : 76° 35' 55.45"
		11	N : 09° 53' 59.66"	E : 76° 35' 54.39"
12	N : 09° 54' 0.18 "	E : 76° 35' 53.64"		



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		13	N : 09° 54'0.41 "	E : 76° 35'53.12"
		14	N : 09° 54'0.87 "	E : 76° 35'51.87"
		15	N : 09° 53'59.81 "	E : 76° 35'50.06"
		16	N : 09° 54'1.25 "	E : 76° 35'48.07"
		17	N : 09° 54'0.74 "	E : 76° 35'46.22"
		18	N : 09° 54'1.43 "	E : 76° 35'44.49"
		19	N : 09° 54'2.60 "	E : 76° 35'45.10"
		20	N : 09° 54'3.14 "	E : 76° 35'47.35"
		21	N : 09° 54'4.15 "	E : 76° 35'46.93"
		22	N : 09° 54'4.80 "	E : 76° 35'46.38"
		23	N : 09° 54'5.17 "	E : 76° 35'45.66"
		24	N : 09° 54'6.93 "	E : 76° 35'45.11"
4	Size of the Mining Lease	4.3046 Ha		
5	Capacity of Mining Lease (TPA)	ROM 2,03,750 TPA(Salable 1,93,562 TPA)		
6	Period of Mining Lease	5 years		
7	Expected cost of the Project	1.50 Crores		
Environmental Sensitivity				
8	Distance of Project site from nearest rail or road bridge over the concerned River, Rivulet, Nallah etc	Thodupuzha River is at 5.5 Kms (NE)		
	Distance from infrastructural facilities	Arakkuzha- 5 km		
	Railway Line	Kochi Station is at 39 Kms (Aerial Distance)		
	National Highway	NH-7 at 32 Kms (Aerial Distance)		
	State Highway	Main Central (M C) Road at 900 mtrs west of the lease area.		
9	Major District Road	Moovattupuzha-Koothakulam Road.1.60 Km(W)		
	Any other Road	Public Road is connecting MC Road- Pandappilly is passing about 0.9 km to the North the lease area		
	Electric Transmission line pole or tower	Koothattukulam-6.5 km.		
	Canal or check dam or reservoirs or lake or ponds	Pandappaly-1.8 km.		
	In take for Drinking water	MVIP arakkuzha-5.3 km		



	Intake for irrigation	MVIP canal Arakkuzha-5.3 km.
10.	Areas protected under international conventions, National or Local legislation for their ecological, landscape, cultural or other related value.	None within 5 km radius
11.	Areas which are important or sensitive for ecological reasons- wetlands, watercourses or other water bodies, coastal zone, biospheres, mountains, forests.	Todupuzha River is at 3.2 Kms (NE)
12.	Areas used by protected, important or sensitive species of flora or Fauna for breeding, nesting, foraging, resting, over wintering, migration.	None within 5 km radius
13	Inland, Coastal, Marine or underground waters	None within 5 km radius
14	State, National boundaries	None within 5 km radius
15	Routes or facilities used by the public for access to recreation or other tourist, pilgrim areas	None within 5 km radius
16	Defense Installations	None within 5 km radius
17	Densely populated or built-up area, distance from nearest human habitation	Koothattukulam an aerial distance of 5 km
18	Areas occupied by sensitive man-made land uses (hospitals, schools, places of worship, community facilities)	<p><u>Schools & Colleges</u></p> <ol style="list-style-type: none"> 1. St Joseph Girls High School-Arakupuzha 4.9km 2. St Mary's Higher secondary School-Arakupuzha 5.4 km 3. Govt.Model High School-Palkuzha 4 km 4. Manimalakkunnu Govt. college 7.2km <p><u>Hospitals</u></p> <ol style="list-style-type: none"> 1. S H Hospital- Arakupuzha 5.3 km 2. Govt Hospital- palakupuzha 3.5 km 3. Veterinary Hospital -Palakupuzha. 3.6 km 4. Panchayath Homeo Dispensary- Arakupuzha. 4.5km 5. Deva Matha Hospital- Koothattukulam 6 km <p><u>Worship</u></p> <ol style="list-style-type: none"> 1. St JMary Foranc Church- Arakupuzha5.8 km 2. St ude shrine-Uppukkundam 1.2 km



		3. St. Mary's Church, -Pandappilly 1.8km 4. St. Jhon Baptist Catholic Church-Vadakara 6 km 5. Bhagavathi Temple-Palakuzha 2.5 km 6. Sree Subramanya-Ambalamkannu 7 km.
19	Areas containing important high quality or scarce resources (ground water resources, surface resources, forestry, agriculture, fisheries, tourism, minerals)	No
20	Area already subjected to pollution or environmental damage (those where existing legal environmental standards are exceeded)	No. this Fresh proposal.
21	Areas susceptible to natural hazard which could cause the project to present environmental problems (earthquakes, subsidence, landslides, erosion, flooding or extreme or adverse climatic conditions)	No, lease area is not susceptible to natural hazard, as there is no history of such incidents.
22	Is proposed mining site located over or near fissure / fracture for ground water recharge	No-geological disturbances are observed, The quarry will act as a reservoir & shall help in ground water recharging.
23	Whether the proposal involves approval or clearance under the following regulations or acts, namely (a) The Forest (Conservation) Act, 1980 (b) The Wildlife (Protection) Act, 1972 (c) The Coastal Regulation Zone Notification, 2011 If yes, details of the same and their status to be given	No
24	Forest land involved (hectares)	No forest land is involved.
25	Whether there is any litigation pending against the project and /or land in which the project is propose to be set up (a) Name of the Court (b) Case No. (c) Orders or directions of the Court, if any, and its relevance with the proposed project.	As per FORM 1M applicant has stated that no litigation pending against the project and /or land in which the project is propose to be set up.
26	Type of Land	Private Patta Land

TECHNICAL SCRUTINY AND ENVIRONMENTAL IMPACT ASSESSMENT BY DEAC

District Environment Impact Assessment Authority [DEIAA]

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The proposal was placed in the 20th DEAC meeting held on 06/04/2018. (Reference 2). The committee appraised the proposal and decided to defer the item for field visit by the sub committee concerned. The DEAC sub committee visited the Quarry project site of Sri Sabu Varghese, M/s S.S. Granites, Palakkuzha Village and Muvattupuzha Taluk and submitted the report to DEAC.

The field inspection details as reported by DEAC (Reference 3).

The proposed quarry is located between north latitudes 9⁰53'59.66" and 9⁰54'06.93" and east longitudes 76⁰35'44.49" and 76⁰35'56.15". Geologically the area is occupied by hard crystalline rocks representing Precambrian metamorphosed rocks. The applied area forms the upper side slope portion of a hilly terrain which, in general, slopes towards north-west. The reported highest elevation of the applied area is 170m AMSL and lowest is 110m AMSL. This proposal corresponds to a fresh quarry i.e., the applied area is virgin and the major portion is occupies by mixed crops. Rock exposures comprises of complex associates of charnockites, quartz, feldspathic and biotite gneiss. The overburden thickness averages about 1m to 2m. (Reference 3).

The inspection team, in general, looked into the impacts on eco-system, flora, fauna, soil, land form, air quality etc, which are likely to alter with the onset of quarrying operations. The potential for natural hazards such as landslides, surface creep, erosion, flooding or any adverse environmental conditions during the time of mining are ruled out, provided if mining is carried out in accordance with the approved mining plan. (Reference 3).

Groundwater generally occurs under phreatic conditions in weathered and fractured crystalline rocks and laterite. It occurs under semi-confined conditions in the deep seated fractured aquifer of the crystalline rocks and tertiary sediments. The geologic zone important to ground water is identified in terms of water holding and water yielding capabilities. Porous granular formations like laterite, weathered and decomposed crystalline rocks as well as fissures, joints and fractures in crystalline rocks constitute the main water-bearing formations. The water table is below 4m-5m from general ground level as observed from an open well located 150 meters further north from the applied area. (Reference 3).

There are no perennial water courses or streams within the applied area. The rain water passes as minor water courses through natural geographic slope and joins the local water bodies forming dendritic drainage pattern. The proposed site does not possess any valuable resources other than granite



building stone. The revenue official present at the time of inspection reported that the area is not under any legal procedures. (Reference 3).

Considering all the aspects the DEAC approved the mining project and recommended DEIAA to grant Environmental Clearance. (Reference 3).

DEIAA DECISIONS

As per DEAC recommendation, DEIAA considered the project proposal. The applicant submitted detailed CSR and remitted Rs. 1, 00,000/- (Rupees One Lakh Only) as processing fee vide chalan no. KL010394902201718M dt. 02/02/2018 of District Treasury, Ernakulam. The applicant has submitted a CSR plan of Rs.2,00,000/- (Rupees Two Lakh Only) as recurring and non recurring expenses for CSR activities.

The proposal was considered in the 21st meeting of DEIAA (Reference 1). The DEIAA committee decided to grant Environmental Clearance to the quarry project of Sri Sabu Varghese, M/s S.S. Granites, Kurangolithadathil House, Karimpana P.O., Koothattukulam, Ernakulam , Kerala in strict compliance with the following General conditions and specific conditions recommended by DEAC.

GENERAL CONDITIONS

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 including 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 should be implemented.
13. Blasting should be done in a controlled manner as specified by 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 5m, and width should not be less than 5m, if there is no mention in the mining plan/specific condition.
18. Mats to reduce fly rock blast to maximum of 10PPV 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 specified under relevant rules/regulations.



27. Explosives should be stores in magazines in isolated place specified and approved by the Explosives Department.
28. A minimum buffer distance of 50m from the boundary of the quarry to the nearest dwelling unit or other structures not being any facility for mining shall be provided.
29. 50m buffer distance should be maintained from forest boundaries.
30. Consent from Kerala State Pollution Control Board under Water and Air Act(S) should obtained before initiating mining activity.
31. All other statutory clearance 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 changes in the scope of the project, extent quality, process of mining technology involved or in any way affecting the environmental parameters/impacts as assessed, based on which only the EC is issued, the project would require a fresh appraisal by this authority, for which the proponent shall apply and get the approval of this authority.
33. The authority reserves the right to add the additional safe guard measures subsequently, if found necessary, and to take action including revoking of the environment clearance under the provision of the environment (Protection Act), 1986, to ensure effective implementation of the suggested safeguard measures in a time bound and satisfactory manner.
34. The stipulation 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, 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 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 District Environmental Impact and Assessment Authority(DEIAA) office and may also been on the website of the Authority at www.environmentalclearance.nic.in . 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 the concerned Grama Panchayath/District Panchayath/Municipality/Corporation/Urban Local Body also to the 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 complaints of the stipulated EC conditions including results of monitored data(both in hard as well as by email) and upload the status of compliance of stipulated EC conditions, including results of monitored data on their website and shall update the same periodically. Each shall simultaneously be sent to the respective Regional Office of MoEF, Govt. of India and also to the District Environment Impact Assessment Authority (DEIAA) office.
38. The details of Environment Clearance should be prominently displayed in a metallic board of 3ft x 3ft with green background and yellow letters of Times New Roman Font 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 DEIAA, No further expansion or modifications in the mine shall be carried out without prior approval of the DEIAA, 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 top soil 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 8 meter and width 20 meter 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 or 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 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, road, green belt development etc. The drains shall be regularly desalted 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 PM2.5 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 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 environment 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 kept in separate account and should not be diverted for other purpose. Year wise expenditure should be reported to the District Environment Impact Assessment Authority (DEIAA) 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 Environment Clearance shall lie with the National Green Tribunal. If preferred with 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 DEIAA 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 DEIAA reserve 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. The order is valid for a period of 5 years from the date of this clearance or the expiry 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 interest 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 DEIAA.
61. Occupational health surveillance programme of the workers should be under taken periodically to observe any contractions due to exposure to dust and take corrective measures, if needed.
62. Commitment of CST should be fulfilled.

SPECIFIC CONDITIONS PROPOSED BY DEAC

1. The applicant should establish a permanent bench mark outside the mining area from which the relative depths of mining should be established and submitted in the calculations as well as in the drawings.
2. The relative levels from the established bench marks should be permanently marked in the boundary points.
3. The solid waste generated during the course of operation shall be utilized for formation of safety bunds all along 7.5m safety zone, internal road maintenance and green belt works.
4. Sufficient number of suitable parapet walls shall be made all along quarries, haulage roads where ever necessary in order to maintain safe working conditions.
5. Proper blast design avoiding over charging and controlled blasting techniques shall be adopted.
6. Construction of garland drains to divert surface run off away from mining area shall be implemented.




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FORTKOCHI**

7. Environmental auditing shall be done every year and same shall be reported to District Collector through District Geologist.
8. Quarrying area shall be under water sprinklers for dust control.
9. Ideal locations shall be identified in and around quarry site suitable for rain water harvesting.
10. Implementation of artificial geo-textiles shall be promoted along borders of buffer zone where chances of rock creep exist during rainy season.
11. Future excavations shall be conducted by strictly forming systematic benches as per the norms of Mine Safety Departments and Kerala Minor Mineral Concession Rules 2015.
12. All quarry workers shall be allowed to enter the blasting area only with personal protective equipments (helmets, safety shoes, reflecting jackets...etc)

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

MONITORING AND ACTION AGAINST VIOLATION OF GENERAL & SPECIFIC CONDITIONS

- 1) This environmental clearance is subject to the general and specific condition mentioned in this proceeding. This EC is liable to be cancelled if general and specific conditions are violated and also Penal action will be taken if DEIAA finds any false statement / information in the project proposal.
- 2) Compliance of the conditions here in will be monitored by the Authority or its agencies and also by the regional office of the Ministry of Environment & Forests, Government of India, Bangalore
- 3) 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.
- 4) Instances of violation if any shall be reported to the District Collector, Ernakulam to take legal action under the Environment (Protection) Act, 1986.
- 5) All the inventory records and other documents related to the operations and maintenance of the quarry should be maintained and produced to the monitory authorities whenever needed or directed to produce the same in the future.
- 6) The given address for correspondence with the authorized signatory of the project of Sri Sabu Varghese, M/s S.S. Granites, Korangolithadathil House, Karimpana P.O., Koothattukulam, Ernakulam , Kerala.


District Environment Impact Assessment Authority [DEIAA]

Page - 12 -

**DISTRICT COLLECTOR
FORTKOCHI**



Snehi
Sri. Snehil Kumar Singh. IAS
Member Secretary, DEIAA
&
Sub Collector, Fort Kochi

To
Sri Sabu Varghese, M/s S.S. Granites,
Korangolithadathil House, Karimpana P.O.,
Koothattukulam, Ernakulam , Kerala.



Copy to:

1. The Additional Chief Secretary to Government, Environment Dept, Govt. Of Kerala
2. Director, Mining & Geology, Thiruvananthapuram - 4
3. Chairman DEIAA & District Collector, Ernakulam
4. Sri. A. Renjan I.F.S, DFO Malayattoor & Member DEIAA
5. Dr. P.S. Easa, Member, National Board of Wildlife & Member DEIAA
6. Sri. A. K Manoj, Geologist, Mining & Geology, Kakkanad, Ernakulam
7. The Secretary, Palakkuzha Grama Panchayath,
8. Tahsildar, Muvattupuzha Taluk.
9. Village Officer, Palakkuzha Village
10. Website
11. Stock File