COMPLIANCE REPORT

October 2018 - March 2019

Quarry project of Mr. Jovin George Kannur District Kerala

Dt.17-07-2019

The Member Secretary District Environment Impact Assessment Authority (DEIAA), DEIAA, Kannur

Ref :- File No. 01/KNR/2017/DEIAA

Sub :- Environment Clearance - Quarry project at Survey No. 275/1A

in Trippangottur Village, Thalassery Taluk, Kannur District, Kerala -

Compliance Report -Second half - Reg.

Respected Sir,

The Quarry (Building stone) project was accorded Environmental Clearance for 3.7556 Ha. by order No. 01/KNR/2017/DEIAA dated 22-05-2017 by District Environmental Impact Assessment Authority, Kannur, Kerala. The compliance report of Second half (October 2018 - March 2019) to the specific and general conditions of the Environment Clearance order is enclosed.

Thanking you,

Yours respectfully,

Mr. Jovin George

COMPLIANCE REPORT

TO

THE CONDITIONS

OF

ENVIRONMENTAL CLEARANCE ORDER

NO: 01/KNR/2017/ DEIAA

Dated: 22-05-2017

BY

DISTRICT ENVIRONMENT IMPACT ASSESSMENT AUTHORITY (DEIAA)

FOR

BUILDING STONE QUARRY
(MINOR MINERAL MINING) PROJECT

AT

SURVEY NOS. 275/1A

MADATHINAMATTATHIL, PALISSERY, TRIPANGOTTUR VILLAGE, THALASEERY TALUK, KANNUR DISTRICT, KERALA

BY Mr. JOVIN GEORGE

KANNUR DISTRICT

KERALA

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INTRODUCTION

Quarry project of **Mr. Jovin George** Madathinamattathil, Palissery, Thalassery P.O. is situated at Survey No. 275/1A, Trippangottur Village, Thalassery Taluk, Kannur District, Kerala.

The quarry project was accorded with the Environmental Clearance (EC) by District Environmental Impact Assessment Authority, Kannur on 22-05-2017. As part of general condition No.36 of Environmental Clearance order, half yearly compliance report needs to be submitted by the project proponent. The compliance report of second half to the specific conditions, health conditions and general conditions of the Environmental Clearance order for the period of October 2018 – March 2019 is being submitted.

COMPLIANCE REPORT

(SPECIFIC CONDITIONS)

PART A

PART - A - SPECIFIC CONDITIONS

01	A mines manager shall be appointed to control ,direct, manage complied	ļ
	and supervise the quarrying operations required under the	
	mines Act ,1952	

As per the Mines Act 1952, the project proponent has appointed a mines manger to control, direct, manage and supervise the quarrying operations. The certificate of Mines engineer is attached as **Annexure No.1** and Form D is attached as **Annexure No 2** for the reference.

0	2	Health	and	welfare	for	the	persons	employed	shall	be	complied
		implem	ented								

The project is keeping a First aid box in the project site. In association with Primary Health Centre of Local Self Government, the project proponent has conducted health check up for the labours. Other facility of housing, food, water and sanitation is provided by the project proponent.

03	Controlled blasting should be practiced and blasting shall be	Complied
	done only during day time. The mitigate measures for control of	
	ground vibration to arrest the fly rocks and boulder should be	
	implemented.	

The blasting is carrying out in controlled manner by using ordinary/electric delayed detonators. All blasting activities are carrying out with the stipulated guidelines of explosive department and other concerned agency. No work will be there in the quarry site at Night. The blasting time in the quarry is fixed at 9.00 am-10.30 am, 2.00 pm- 3.00 pm and 4.00 pm to 5.30 pm. The mitigate measures to arrest ground vibration and fly rock is detailed in General condition No 11. The photograph of the Time showing blasting board is attached as **Plate No. 1.**

04	Plantation shall be done which includes a green belt of	Being
	adequate width around the mining lease area excluding the	Complied
	rocky area, along roads, overburden dumps and non-	
	mineralized area by planting suitable native species in	
	consultation with the local DFO/Agriculture department.	

The project proponent has started to plant various saplings in the project site to develop a green belt around the project area. Green belt of adequate width is provided all around the Lease Area with Plantation of Native species in consultation with the Local DFO/Agriculture Department. Avenue tress also planted along the road side to minimise the dust emission.

05	The drains should be regularly de silted and maintained	Complied
	properly check dam and gully checks shall be constructed	
	wherever to required to arrest siltation.de siltation shall be done	
	every year before the onset of monsoon	

To arrest the quarry waste entering in to the public drain and stream, the project has constructed De siltation chambers. These chambers will be de silted during summer season.

06	Fencing shall be maintained properly all around the lease area.	Complied	
			i

As part of demarcation and enhance safety, the project proponent has erected barbed metal wire fencing around the mining area with height of 5 ft. This will help to prevent falling of animals/human being/dumping of garbage etc.

07	The CSR need redrafting with inclusion of felt needs of the	Complied
	locality with special emphasize for implementing ground water	
	recharging water recharging techniques in and at the vicinity of	
	the proposed site.	

The project proponent has redrafted the CSR by including the ground water recharging techniques.

08 Appropriates sign boards should be displayed. Complied

The project proponent has installed appropriate sign boards in the project site. The photograph of the signboards is provided at **Plate No. 9**.

09 The blasting time must be displayed and strictly adhered to. Complied

The blasting time is fixed at 9.00 am-10.30 am, 2.00 pm- 3.00 pm and 4.00 pm to 5.30 pm on all working days in the quarry. A board containing blasting time is displayed in the project site. The photograph of the Time showing blasting board is attached as **Plate No. 1.**

10 Dust suppression mechanism must be in place. Complied

The project splashes the haulage road and critical areas with the help of vehicles in regular intervals to arrest dust emissions from the road while transportation of materials.

11	A separate small plot to be maintained in the premise to	Being
	preserve rare and endemic species .lf any ,listed in the	Complied
	biodiversity assessment etc.	

The project will start to plant various saplings in the project site. The Project has demarcated a small plot to preserve the endemic species.

12	The PPV values must be less than 10 mm/sec.	Noted

The project proponent is using controlled blasting by using electric/ordinary delayed detonators. Blasting operations are controlled by a qualified person. Therefore the project proponent can limit the PPV under 10 mm/sec

ſ	13	The green belt shall be provides around the periphery.	being
			complied

The project has provided Green belt around the project area. This will reduce air and noise pollution.

14	Where the height of the bench formed during earlier workings	Noted
	exceeds the maximum each of the excavator engaged for work,	
	such bench height shall be reduced from top to bottom.	

The extraction of minerals will be from top to bottom. The maximum height of all benches will be 5 meters. All mining activities are progressing under the supervision of qualified personals.

15	Loose or hanging rock or mineral boulder on the side wall shall	Being
	be dressed down before engaging persons for work at the	Complied
	bottom of the bench.	

To remove the loose or hanging mineral boulders on the side wall the project proponent deploys vehicles like JCB. The labours work on the bottom bench only after clearing such loose minerals form the side wall.

16	Permanent boundary pillars should be fixed by the proponent	complied
	before commencing quarrying	

To demarcate the mining area, permanent Boundary pillars were fixed at each bent of the lease area. The photograph of the boundary pillars is provided at **Plate No. 2**.

17	No quarry blasting to be undertaken and sustained till warning	Noted
	time limit expires and /or when continues 48 hours cumulative	
	rainfall exceeds 8 cm and blasting shall be resumed until 24hrs.	

of rain free situation arises in the quarry locality based on the evaluation by the revenue officials.

The condition will be complied by the project proponent when such situation arises. No quarry blasting to be undertaken and sustained till warning time limit expires and /or when continues 48 hours cumulative rainfall exceeds 8 cm and blasting shall be resumed until 24hrs

18	All waste dumps and topsoil dumps shall be properly stabilized	Being
	by using coir mats or bio regeneration .proper drainage system	Complied
	shall be provides so the water is properly diverted away from	
	the dump slopes with no disturbance to the stability of the	
	slopes.	

The waste dumps and topsoil dumps will be stabilised by using coir mats or bio regeneration. The drainages are constructed in the project site. This will help to manage the storm water during monsoon season.

19	All dumps slopes shall be sufficiently stabilized by using	Noted
	appropriate species mix of grass .creepers, shrubs &trees. This	
	shall be done in consultation with the forest department and	
	local research institution and experts in stabilization of mine	
	dumps.	

The project will plant appropriate grass on the dump to prevent sliding and soil erosion once it is attain its maximum capacity. The overburden and topsoil stacking is progressing in the project site. it is being stacked in the project site.

20	Garland drains of at least 2m width shall be provided all along	Noted
	7.5 m buffer zone to divert the water from entering the quarrying	
	slopes. These drains shall be cleaned every year before the	
	monsoon season.	

The project proponent has constructed garland drain to catch the rain water along 7.5 m buffer zone. This can divert the storm water entering the quarrying slopes.

21	The water from the garlands drainage shall directed to the silt	Will be	l
	settling ponds. The clarified overflow from silt settling ponds	complied	l
	shall be directed to a Rain Water Harvesting (RWH) pond before		l
	releasing the clarified water to the natural watercourse.		l

The water from the garlands drainage will be directed to the silt settling ponds. The RWH pond is under construction. The clarified overflow from silt settling ponds will be directed to a Rain Water Harvesting (RWH) pond before releasing the clarified water to the natural watercourse.

22	A retaining wall of stone rubbles with wire mesh, of sufficient	Noted
	width and strength (not less than 2m)shall be constructed at the	
	bottom of the slope of the quarry .lease area to arrest any likely	
	roll of boulders during heavy rainfall.	

At the bottom of the slope the project will construct a retaining wall with stone rubbles. This will prevent sliding and slumping. This will be done at appropriate place in the mining area.

COMPLIANCE REPORT

(GENERAL CONDITIONS)

HEALTH

0	1	First Aid kit provide in the work site. It shall be periodically	Complied
		maintained property .some labourers shall be trained on First	
		Aid.	

The project proponent is keeping first aid box in the project site. The training on first aid provided to selected labours..

02 Whole some drinking water should be provided. Complied

Drinking water will be available at all time in the project area.

O3 Premises should be maintained as wet to suppress the dust. complied

The project proponent splashing water on haulage roads and loading and un loading point to reduce the emission of dust

04 Sanitary type of latrines and urinals should be provided. Co	Complied	
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The project proponent gives importance to the sanitary needs of workers in the project site. So the project proponent has given sanitary type of latrine and urinals to every labour in the project site. The photograph showing sanitary type of latrines and urinals are attached as **plate No. 3**

05 Resting place should be provided for workers. Cor	nplied
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The project proponent has provided adequate rest rooms in the project area to get proper rest to the labours. **Plate No. 4** shows the resting place of workers

06	'No Smoking' board should be exhibited according to COTPA	Complied
	Act.	

The project proponent has displayed No smoking area in the project site. The photograph of the no smoking board is provided at **Plate No. 5.**

07	Work should not be done in night.	Complied	l

To reduce the inconvenience of community, the quarrying activities are limited to day time only as per KSPCB guidelines. The working time of quarry is at the 7 am to 6 pm.

0	8	Details of nearest hospitals, shortest route to hospitals and	Complied
		contact no etc. Should be available.	

Details of nearest hospital, Fire station, Police station, etc are available in the project site. **Plate No. 6** Shows the board fixed with Emergency contact numbers

09	Approach roads should be maintained properly.	Being
		complied

The approach road has been properly maintaining by the project proponent to arrest the dust emission and easy transportation.

COMPLIANCE REPORT

(GENERAL CONDITIONS)

PART B

PART - B - GENERAL CONDITION

()1	Rain	Water	Harvesting	capacity	should	be	installed	as	per	the	Complied
		preva	iling pro	ovisions of K	MBR / KP	BR, unle	ess (otherwise	spe	cified	d.	

Compliance:

As part of water conservation and to collect rain water from the entire mining area, the project has developed one rain water harvesting pond in the quarrying area. The storm water flow is leading to the pond through natural drainage.

02	Environment Monitoring Cell (EMC) as agreed under the affidavit	Complied
	filed by the proponent should be formed and made functional.	

Compliance:

To monitor and evaluate the works done under the conditions stipulated in the EC order, the project proponent formed an Environmental Monitoring Cell (EMC) with Mr. Jovin George as chairman of the monitoring cell. The EMC meeting convened regularly for a sustainable environment. The EMC meeting convenes regularly for a sustainable environment. The details of the monitoring cell are given below

<u>Table 1 - Environmental Monitoring Cell (EMC)</u>

SI. No.	Post	Name
1	Head of monitoring cell	Mr. Jovin George
2	Member	C G George
3	Member	Kadappa Khadar Vali

03	Suitable avenue trees should be planted along either side of the	Complied
	tarred road and open parking areas, if any, inclusive of approach	
	road and internal roads.	

Compliance:

The green belt can reduce the adverse effect of mining industry. To reduce air and noise pollution, the project proponent has planted few avenue trees along either

side of the road. There is natural vegetation including trees are presents in the sides of road and parking area. will help to reduce air and sound pollution. The photographs of avenue trees planted in the road side are given in **Plate No.7**.

04	Maximum possible solar energy generation and utilization shall be	Will be	
	ensured as an essential part of the project.	Complied	

Compliance:

The project is intending to use maximum renewable energy to reduce electrical consumption from KSEB. As part of this, the project proponent is yet to install a solar street light in the project site.

05	Sprinklers shall be installed and used in the project site to contain	Complied
	dust emissions.	

Compliance:

To prevent dust emissions from the road while transportation of materials, the project does splashes the haulage road and critical areas with the help of vehicles in regular intervals.

06	Eco-restoration including the mine closure plan shall be done at the	Noted
	own cost of the project proponent.	

Compliance:

Eco restoration is in an integral part of mining activity. The eco restoration and the mine closure plan will be done at the own cost of the project proponent as per the approved mining plan.

07	At least 10 percent out of the total excavated pit area should be	Will be
	retained as water storage areas and the remaining area should be	complied
	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 EC.	

The proponent has initiated steps to plant indigenous species as part of concurrent eco restoration. The project will retain 10 percent of total excavated pit as rain water storage area after closure of the mine. The remaining area will be reclaimed with stacked dumping of overburden and top soil. As part of its eco – restoration plan, the project will plant indigenous plant species that are eco – friendly on the reclaimed area.

30	Corporate Social Responsibility (CSR) agreed upon by the proponent	Complied
	should be implemented.	

Compliance:

As part of inclusive growth of the community, the project proponent executes various activities under Corporate Social Responsibility of the firm with the consultation of Panchayath. The main activities were under the sectors of education, housing, health etc. The details of CSR provided in the period of second half is mentioned in the **Table No.2**. Receipts of CSR is attached as **Annexure No. 12**

Table No.2 – Detail of performed activities under CSR

Sectors	Activities	Partners	Beneficiaries	Amount Spent In Rs.
Arts, Sports & Festival	Donation	Srinarayana Mandhiram Parayullaparambath	Public	50000
	Donation	Alachery Sri Ambalakandy Madappura Thira	Public	3500
	Donation	Swasraya Kala Samskarika Vedhi Ayyallur	Public	2000
	Donation	Kalasa Goshayathra Poyiloor	Public	40000
	Donation	Thira Mahothsavam Vadakke Poyiloor	Public	25000

	Bondaon	Foundation Total	1 45115	400500	
	Donation	Employees Org		5000	
Social	Donation Donation	Cmrdrf Kerala Panchayath	Public Public	200000	
Social	Donation	Consolet	Dublio	200000	
	Donation	Sree Porkkali Bhagavathi Kshethram Palayi	Public	5000	
	Donation	ation G Pavithran Oniyan Public Preman Voley Fest			
	Donation	V Sunithram Smaraka Voley Fest	Public	15000	

09	The lease area shall be fenced off with barbed wires to a maximum	Complied
	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.	

As part of clear demarcation and to prevent falling of animals/human being/dumping of garbage etc, the project installed fencing around the area where Environmental Clearance obtained. The complete installation of barbed metal wire fencing around the mining area with height of 5 ft will be completed.

10	Warning	alarn	ns ir	ndica	ating the tin	ne o	f blas	sting (to be do	one	at specific	complied
	timings)	has	to	be	arranged	as	per	stipulations	of	Explosive	
	Department.										

Compliance:

To comply condition stipulated by Explosive department and Environmental clearance order, the project proponent has installed warning alarms in the quarry site. This alarm can intimate the general public that the blasting is going to happen.

11	Control	measures	on	noise	and	vibration	prescribed	by	KSPCB	Complied
	should b	oe impleme	nted							

To reduce noise and vibration, the following measures are adopting in the project site.

- Proper maintenance of machinery and equipments
- The machineries like breaker and excavator has well sound proof cabin so that the machine operators can work without stress due to the sound.
- Personal protective devices i.e., earmuffs, ear plugs etc. are provided to workers working in high noise areas.
- The mining activity held in day time only.

Blast vibrations and control measures

- Controlled blasting technique is adopted in this project in order to reduce blast vibrations.
- ❖ The maximum charge per delay is not more than 10kg to limit the PPV values to 10mm/sec.
- Optimum delay sequence and stem to column ratio is maintaining to minimize the ground vibration intensity.
- The project proponent has appointed qualified persons to monitor the mining operations

12	Quarrying activities should be limited to day time as per KSPCB	Complied
	guidelines/specific conditions.	

Compliance:

To reduce the adverse impact of the quarry to the local community, quarrying activities are limited to day time only as per KSPCB guidelines. The Quarrying time is from 7 am - 6 pm.

13	Blasting should be done in a controlled manner as specified by the	Complied
	regulations of explosives department or any other concerned agency.	

All blasting activities are supervising by a qualified person with the specified regulations of explosive department. The blasting is carrying out in controlled manner by using ordinary/electric delayed detonators. The blasting time is fixed at 9.00 am-10.30 am, 2.00 pm-3.00 pm and 4.00 pm to 5.30 pm. The photograph of the Time showing blasting board is attached as **Plate No. 1.**

14	A licensed person should supervise/control the blasting operations.	Complied
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Compliance:

The project proponent has appointed mines manager in the site to supervise/control exploitation of minor minerals including blasting at the project site. The certificate of licensed person is attached as **Annexure No. 1** and Form D is attached as **Annexure No. 2**

15	Access roads to the quarry shall be tarred to contain dust emissions	Being
	that may arise during transportation of materials.	Complied

Compliance:

The project splashes water on the road to arrest the dust production during summer season. To contain dust emissions and for the trouble free transportation of materials, the project will tar the access road in the quarry site.

16	Overburden materials should be managed within the site and used	Complied
	for reclamation of mine pits as per mine closure plan/ specific	
	conditions.	

Compliance:

The overburden and topsoil need to extract during the time of mining, these natural resources will be staked in the project site. This will be used for plantation, haulage roads and land filling in the mining area. No overburden will let out from the project site.

1	7	Height of the benches should not exceed 5m, and width should not	Being
		be less than 5m, if there is no mention is the mining plan/specific	Complied
		conditions.	

The quarrying has been carried out as per mining plan. To enhance safety and conserve environment, the project will extract the minerals by creating benches. The benches will not exceed 5 meters of height and the width of the bench will have minimum of 5 meters. The quarrying is carrying out as per mining plan submitted before the DEIAA.

18	Mats to reduce fly rock blast to a maximum of 10 PPV should be	Noted
	provided.	

Compliance:

The project proponent is using ordinary/electric delayed detonator for the blasting. The blasting will be under the supervision of qualified person. The blasting through delayed detonators can reduce the incident of fly rock. The project will assure PPV will be under 10 in all blasting.

19	Maximum depth of mining from general ground level at site shall not	Will	be
	exceed 10m.	compl	ied

Compliance:

The project proponent will follow the approved mining plan for the exploration of building stone. Therefore mining depth will not exceed beyond 10 meter or not below the level of the nearest stream bed, whichever is less.

20	No mining	operations should be carried out at places having a slope	Noted
	greater	than 45 ⁰ .	

All section in the mining area is under the prescribed degree of slope therefore No mining operation is carried out with a slope greater than 45°.

21	Acoustic	enclosures	should	be	provided	to	reduce	sound	Being
	amplificati	ons in addition	on to the	prov	visions of g	reen	belt and	hollow	Complied
	brick enve	elop for crus	hers so	that	the noise	leve	el is kept	within	
	prescribed	d standards gi	iven by C	PCB	/KSPCB.				

Compliance:

To reduce the impact of sound to the labours in the unit, the project has provided ear plugs. Vegetation around the mining area will help to reduce noise and air pollution. This helps the noise level kept within prescribed standards. The project is trying to enhance the vegetative cover by planting more tree saplings.

22	•	The	workers	on	the	site	should	be	provided	with	the	required	Complied
		prote	ective equ	iipm	ents	such	as ear r	nuffs	s, helmet,	etc.			

Compliance:

To ensure the safety of labours in working site, the project has provided adequate Personnel Protective Equipments (PPE) such as helmets, ear plugs, safety belts, glows, etc.

23	Garland drains with clarifiers to be provided in the lower slopes	Noted
	around the core area to channelize storm water.	

Compliance:

The proponent is very conscious to prevent all quarry waste to enter in the the public drainage or stream. The project has constructed storm water drains in the lower slopes of the project area for effective management of storm water. This helps to channelize the storm water to the rain water collection pond and the most of the debris will be settled down in the bottom of the pond. The clarifiers will be installed soon.

Ī	24	The transportation of minerals should be done in covered trucks to	Complied
		contain dust emissions.	

To avoid dust emission while transportation of materials, the project assures the trucks were covered before it leaving the project site

2	25	The proponent should plant trees at least 5 times of the loss that has	Being
		occurred while clearing the land for the project.	complied

Compliance:

The project proponent will plant various saplings in the project area as a compensation of loss of trees while the project is clearing the land for mining.

26	Ç	Disposal of spent oil from diesel engir	es should be as specif	ed Being
		under relevant Rules/Regulations.		complied

Compliance:

Disposal of spent oil from diesel engines will sell to the approved recyclers/local recyclers.

Ī	27	Explosives should be stored in magazines in isolated place specified	complied
		and approved by the explosives department.	

Compliance:

As part of safety, Explosives are stored in magazine. The magazine situated in an isolated place specified and approved by the explosives department. The area surrounded to the magazine was fenced with barbed metal wire. **Plate No 8** shows the photograph of the Magazine.

Ī	28	A minimum buffer distance of 100m meter from the boundary of the	complied
		quarry to the nearest dwelling unit or other structures, not being any	
		facility for mining shall be provided.	

To reduce the adverse impact on community life, the norms of Kerala State Pollution Control Board regarding the distance criteria of residences, roads, rivers and worship places is adhered by the project. The distance of the nearest house was 143 meter form the quarry, the KSPCB condition is 100 meter.

29	100 m buffer distance should be maintained from forest boundaries.	Complied

Compliance:

The project has left more than 100 meters as buffer distance from the project site.

Ī	30	Consent from Kerala Pollution Control Board under Water and Air	Complied
		Act(s) should have been obtained before initiating activity.	

Compliance:

The project has obtained consent from KSPCB under Water and Air Act(s). The copy of certificate of "Consent to Operate" (Renewal) from Kerala State Pollution Control Board is provided in **Annexure No.3**.

3	1	All other statutory clearances should have been obtained, as Complied	
		applicable, by project proponents from the respective competent	
		authorities including that for blasting and storage of explosives.	

Compliance:

The certificates obtained from concerned statutory authorities are enclosed in **Annexure No. 3, 4, 5, 6 & 7**. The details are given in **Table No 3**

TABLE 3 – APPROVALS FROM COMPETENT AUTHORITIES

Name of the Statutory approval	Name of the Statutory authority			
Environmental Clearance order	State Environmental Impact Assessment			
	Authority, Kerala			
"Consent to Operate"	Kerala State Pollution Control Board			

Explosive License	Ministry of Commerce & Industry – Petroleum				
	& Explosives Safety Organization (PESO)				
License for quarry operations	Gram Panchayath				
Permit order	Directorate of Mining and Geology				

32	In the case of any change(s) in the scope of the project, extent	Will be
	quantity, process of mining technology involved or in any way	complied
	affecting the environemental 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.	

At present there is no change in the scope of the project. The project will seek for a new Environmental clearance in the case of any change(s) in the scope of the project.

33	The Authority reserves the right to add additional safe guard	Noted
	measures subsequently, if found necessary, and to take action	
	including revoking of the environment clearance under the provisions	
	of the Environmental (Protection) Act 1986, to ensure effective	
	implementation of the suggested safeguard measures in a time	
	bound and satisfactory manner.	

Compliance:

The project is willing to add all possible additional safe guard measures subsequently if the authority found necessary.

34	The stipulations by Statutory Authorities under different Acts and Noted
	Notifications should be complied with, including the provisions of Wate
	(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.

The stipulated orders and directions under different act and notification including EIA notification will be scrupulously followed. A brief list of various Acts and notifications which are followed by the proponent is given below

- > Kerala Minor Mineral Concession Rules, 2015.
- > Mines Act, 1952
- > Explosive Rules, 2008
- > Kerala Panchayat Raj Act, 1994
- > Water Pollution (Prevention & Control) Act, 1974
- > Air Pollution (Prevention & Control) Act, 1981
- > Environment Protection Act, 1986
- > EIA Notification, 2006 / 2009
- ➤ The Kerala Promotion of Tree Growth in Non-Forest Areas (Amendment) Act, 2007.

35	The project proponent should advertise in at least two local news								
	papers widely circulated in the region, one which (both advertisement								
	and the newspaper) shall be in the vernacular language informing								
	that the project has been accorded Environmental Clearance and								
	copies of clearance letters are available with the Department of								
	Environment and Climate Change, Govt. of Kerala and may also be								
	seen on the website of the Authority at www.seiaakerala.org. The								
	advertisement should be made within 10 days from the date of								
	receipt of the Clearance letter and the copy of the same signed in all								
	pages should be forwarded to the office of this authority as								
	confirmation.								

Complied

Compliance:

An advertisement in two local daily newspapers (English and Malayalam) regarding Environmental Clearance accorded to the quarry project was given within the stipulated period and the copy of the same was submitted at SEIAA Kerala.

A copy of the clearance letter shall be sent by the proponent to concerned Grama/District Panchayath / 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.

Complied

Compliance:

A copy of the Environment Clearance letter was submitted to the Panchayat Office. The project proponent did not receive any suggestions / representation from anywhere while the processing the proposal therefore did not give the copy of clearance latter to anyone. At present the project does not have a website this will be created soon. The Acknowledgement of the clearance letter sent to the panchayth is attached as **Annexure No. 8**

The proponent shall submit six monthly 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.

Complied

Compliance:

The compliance report is being submitted along with the results of monitored data to the District Environmental Impact assessment Authority, Kannur, State Environmental Impact assessment Authority, Kerala and the Regional Office of MoEF&CC, Bangalore both in hard copy as well as mail. The monitoring result are attached as **Annexure No. 9, 10 & 11.**

38	The	details	of	Environmental	Clearance	should	be	prominently	complied
	displ	ayed in	a m	etallic board of	3 ft x 3ft wit	h green	bac	kground 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.

Compliance:

The conditions of the environmental clearance prominently displayed in a metallic board of 3 ft x 3 ft with green background and yellow letters of Times New Roman font was installed. The photograph of the metallic board is attaché as **Plate No. 10**

39	The proponent should provide notarized affidavit (indicating the	Complied
	number and date of Environmental Clearance proceedings) that all	
	the conditions stipulated in the EC shall be scrupulously followed.	

Compliance:

An assurance in the form of affidavit was already submitted to DEIAA

40	No change in mining technology and scope of working should be	Noted
	made without prior approval of the SEIAA, No further expansion or	
	modification in the mine shall be carried out without prior approval of	
	the SEIAA, as applicable.	

Compliance:

The project proponent is not intending to expand the area of mine, technology and scope of working. The project will appear SEIAA for Environment Clearance if the project wants to expand its scope.

41	The project proponent shall ensure that no natural water course	Noted
	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.	

There is no such natural water course or thodu is flowing along the project site. The project will ensure the natural runoff of storm water. No stream is originating from the lease area. The nearby water body is Vamanapuram River which is 10 Km away from the project site.

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 un loading points & transfer point to reduce fugitive emissions.

Compliance:

The project proponent has monitored the ambient air quality as per National Ambient Air Quality Standard (NAAQS), during the time of appraisal of the project. The project proponent is intending to increase splashing of water and installation of sprinklers at loading, unloading and transfer points.

The top soil, if any, shall be temporarily 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 staked 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 bump. The entire excavated area shall be backfilled. Monitoring and management of rehabilitated areas should continue until the vegetation becomes self-sustaining.

Noted

Compliance:

The natural resources like top soil and overburden is being stacked in a designated place within the project site. Only topsoil will be used for plantation.

Overburden will be used for landfill and to construct haulage roads in the mining area. The excess will be stored in a designated place as per the direction of District Environment Impact Assessment Authority (DEIAA), Kannur. The Environment Monitoring Cell will monitor the execution of eco restoration.

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 de silted particularly after monsoon and maintained properly.

Compliance:

The project proponent has being constructed effective garland drains to catch all the storm water during the time of monsoon season. These channels will direct the water to the rain water collection pond. All sediments and silts are settling at the bottom of the pond and only cleared water is letting out. The water from the pond can be used for splashing of water on roads to arrest the dust.

45 Effective safeguard measures such as regular water sprinkling shall be carries out in critical areas prone to air pollution and having high levels of PM₁₀ and PM_{2.5}, such as haul road, loading an un loading points and transfer points – it shall be ensured that the Ambient Air Quality Parameters confirm to the norm prescribed by the Central Pollution Control Board in this regard.

Compliance:

The project proponent is regularly checking the pollution of all vehicles in the site and spraying water in critical areas prone to air pollution with the help of vehicle. The project proponent will fix sprinklers in critical area to reduce the dust emission such as loading and unloading points, haul roads and transfer points. The ambient air quality is monitoring with the help of an approved laboratory.

46	Fugitive dust emission from all the sources should be controlled	Being
	regularly. Water spraying arrangements on haul roads, loading	complied
	and unloading and at transfer point should be provided and	
	properly maintained.	

The project proponent splashes water in critical area to reduce the dust emission such as loading and unloading points, haul roads and transfer points. The sprinklers and vehicle for water spraying are properly maintained.

47	Measures should be taken for control of noise levels below 85	Complied
	dBA in the work environment.	

Compliance:

The main sound generating activities are the playing of jack hammer, breaker, vehicles and blasting operations. The level noise from all these activities will not go beyond 85dBA. The project proponent will take appropriate action to reduce the sound by employing possible measures. These are mentioned under the condition number 11.

48	A separate Environmental Management Cell with suitable	Complied
	qualified personal should be set up under the control of a senior	
	executive, who will report directly to the Head of the Organization.	

Compliance:

To monitor all conditions stipulated in the Environment Clearance and environment Management Plan, the project proponent constitutes an Environment Monitoring Cell with Mr. Jovin George as the head of the Cell.

49	The funds earmarked for environmental protection and CSR	Being
	activities should be kept in separate account and should not be	complied
	diverted for other purpose. Year wise expenditure should be	

reported to the State Environment Impact assessment authority (SEIAA) office.

Compliance:

The project proponent executes many activities under Corporate Social Responsibility (CSR) for community development. To implement these activities in a good manner, the project proponent will open an account for keeping the funds earmarked for environmental protection and CSR.

50	The Region	nal Office	of MoE	F &CC located	at Ban	galore shall	Will	be
	monitor co	mpliance	of the	stipulated cond	litions.	The project	comp	lied
	authorities should extend full cooperation to the officer(s) of the							
	regional	Office	by	furnishing	the	requisite		
	data/information/monitoring reports.							

Compliance:

The project proponent scrupulously follows the condition stipulated in the EC order and keeping all records with a good documentation system. The project will extent all possible cooperation to the officers form regional office of MoEF &CC and can produce all data/information/reports when they are asking for the same.

51	Any appeal against this environmental clearance shall lie with	Noted
	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	Noted
	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	Noted			
	implementation of any of the specific or this implementation of				
	any 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.				

Compliance:

The project proponent is willing to implement the conditions stipulated in the Environment Clearance order. The project can execute all possible measures in the project site for the conservation of environment.

54	The above conditions shall prevail not withstanding anything to	Noted
	the contrary, in consistent, or simplified, contained in any other	
	permit, license on consent given by any other authority for the	
	same project.	

Compliance:

The project will give priority to the conditions stipulated in the Environment clearance Order.

55	This order is valid for a period of 5 years or the expiry date of	Noted
	mine lease period issued by the Govt. of Kerala, whichever is	
	earlier.	

56	The environmental clearance will be subject to the final order of	Noted
	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	Will	be
	table and is should not intersect ground water table.	comp	lied

Compliance:

The project proponent is following approved mining plan for the extraction of building stones. The project will restrict its mining operations above the ground water table.

58	All vehicle used for transportation and within the mine shall	Complied
	have "PUC" certificate from authorized pollution taking center.	
	Washing of all vehicles shall be inside the lease area.	

Compliance:

As part of reduce air pollution, the project proponent is monitoring the pollution level of all vehicles playing in the project site. This monitoring conducts only in authorized pollution testing center.

59	Project proponent should obtain necessary prior permission of	Noted
	the competent authorities for drawl of requisite quantity of	
	surface water and ground water for the project.	

Compliance:

At present, the need of prior approval is not necessary to draw ground water and surface water for the project.

60	Regular monitoring of flow rates and water quality upstream and	Noted
	down streams of the springs and perennial nallahs flowing in	
	and around the mine lease area shall be carried out and reported	
	in the six monthly report to SEIAA.	

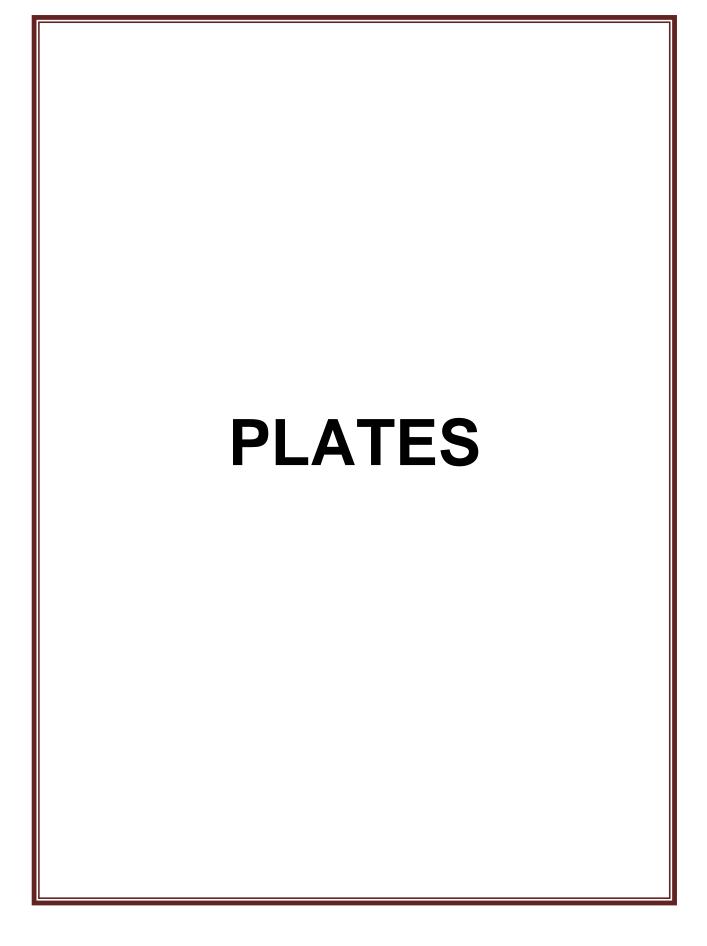
Compliance:

There is no stream or springs flowing in and around to the mine lease area. The project will install de siltation trap and other mechanism to prevent sediments and wastes from the mining area entering in to the public drainage system.

61	Occupational health surveillance programe of the workers complied	
	should be under taken periodically to observe any contractions	
	due to exposure to dust and take corrective measures, if	
	needed.	

Compliance:

The project proponent has started occupational health surveillance programme in association with Primary Health Center (PHC) of Kerala government for the labours working in mining area and crusher.





Board showing blasting time

Plate No. 2



Boundary Pillars





Sanitary Latrine and Urinals

Plate No. 4



Resting Room

Plate No. 5



No Smoking Board

Plate No. 6



Emergency Contact Numbers



Avenue Trees

Plate No. 8



Magazine



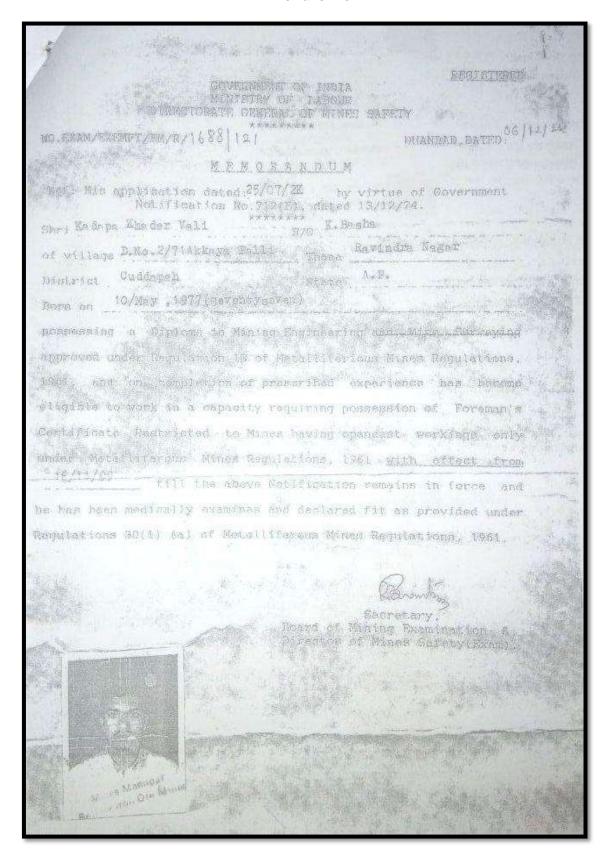
Sign Boards

Plate No. 10

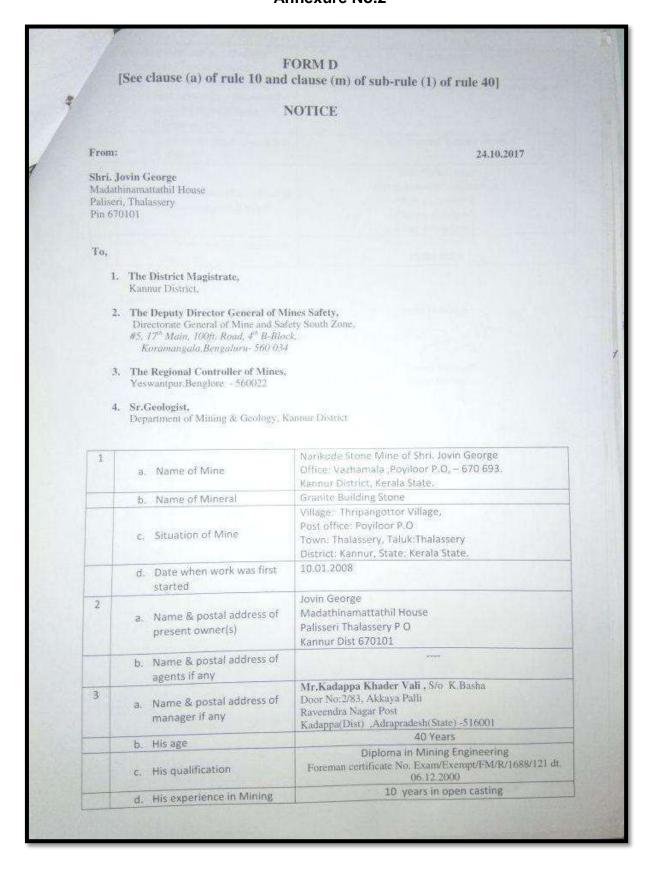


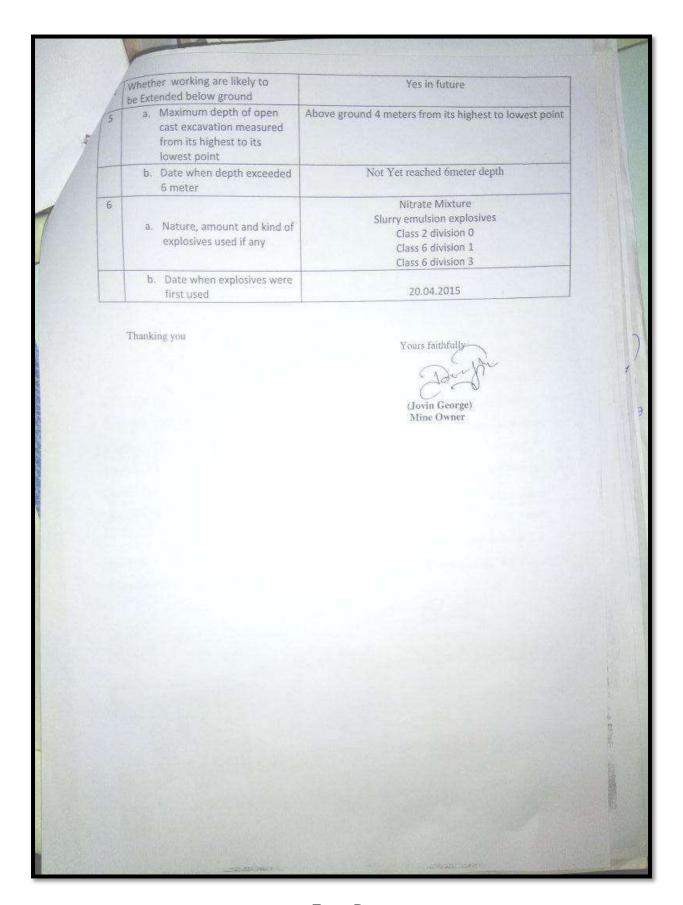
Metallic Board

ANNEXURE



Certificate of licensed Person





Form D



KERALA STATE POLLUTION CONTROL BOARD

FILE NO. :PCB/KNR/ICE/1915/2014

Date of issue :23/05/2017

INTEGRATED CONSENT TO OPERATE - RENEWAL

Consent No: PCB/KNR/ICO-R/360/2017

Ref: 1. Consent No: PCB/KNR/ICO/447/2014 Dated: 04/11/2014.

2. Your application dated 17/05/2017.

The 'Integrated Consent to Operate' issued as per reference above to M/s Quarry owned by: Sri. C.G George, Managing Director Pathikal Granites Pvt Ltd, Panoor is hereby renewed up to 30/04/2020 and issued to M/s QUARRY OWNED BY JOVIN GEORGE, PATHIKAL, POYILOOR. P.O., KANNUR DT - 670693 The consent(s)/ variation order(s) cited under reference are integral part of this renewal order and this order is subject to the conditions stipulated therein and the following modifications/ additions.

I. GENERAL

S.No.	Items	Description
1	1.4 OCCUPIER DETAILS	Sri. JOVIN GEORGE, MADATHINAMATTATHIL HOUSE, PALISERI, THALASSERY.P.O., THALASSERY, KANNUR DT - 670101
2	1.14 CAPITAL INVESTMENT	40,00,000/-
3	1.1 VALIDITY	30/04/2020
4	1.12 FEE REMITTED/YEAR	6560/-
5	1.13 TOTAL FEE REMITTED	19680/-
6	1.16 ACTIVITY	QUARRYING OF ROCK IN 3.7556 HECTARES
7	1.2 NAME AND ADDRESS OF THE ESTABLISHMENT	QUARRY OWNED BY JOVIN GEORGE,PATHIKAL, POYILOOR.P.O., KANNUR DT - 670693

II. Stack Details

Page

Copy of Consent form PCB



Validity expires on 21.05.2022

Proceedings of the District Environment Impact Assessment Authority Kannur

Present: Sri. Mir Mohammed Ali I.A.S, Chairman; Sri. O Jayarajan I.F.S (Rtd), Member ;Sri.Suneel Pamidi,I.F.S ,Member and Sri. P.. Gangadaran, Member Secretary.

Sub: DEIAA- Environmental clearance for the proposed Quarry project of Sri.Jovin George, Madathinamattathil, Palissery, Thalassery.P.O. for an area of 3.7556Hectares in Survey No. 275/1A of Tripangottur Village, Thalassery Taluk, Kannur District

DISTRICT ENVIRONMENTAL IMPACT ASSESSMENT AUTHORITY, KANNUR

No. 01/KNR/2017/DEIAA

Dated, ,22/05/2017, Kannur

Ref: 1. Online Application dated 17/01/2017 from Sri.Jovin George, Madathinamattathil, Palissery, Thalassery.P.O.

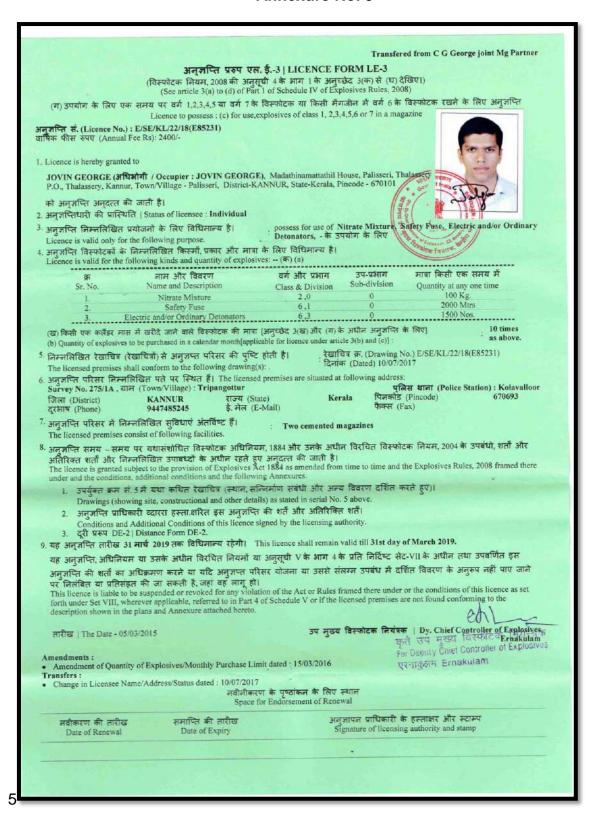
- 2. Minutes of the $3^{\rm rd}$ meeting of DEAC held on 17/03/2017. 3. Minutes of the $5^{\rm th}$ meeting of DEAC held on 04/05/2017. 4. Minutes of the $6^{\rm th}$ meeting of DEIAA held on 19/05/2017.

ENVIRONMENTAL CLEARANCE NO. 04/2017

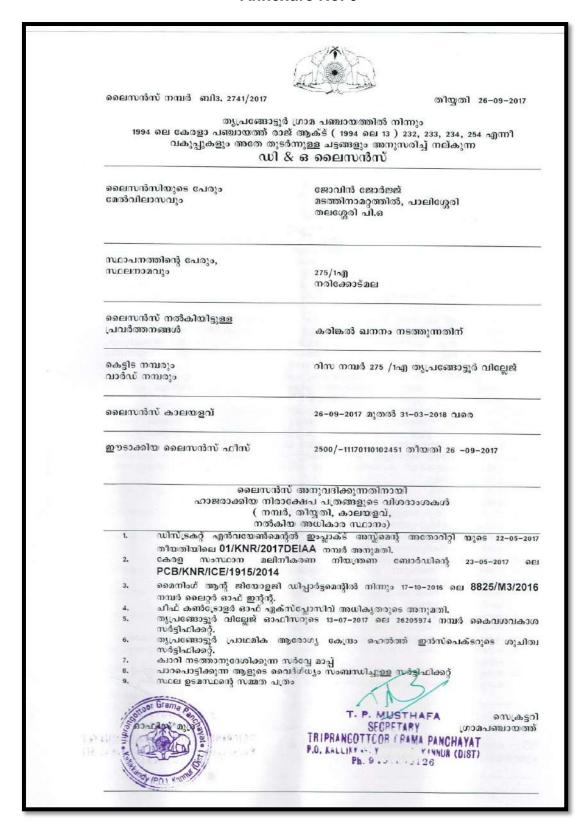
Sri.Jovin George, Madathinamattathil, Palissery, Thalassery.P.O. Kannur District ,Kerala vide his application received on 17/01/2017, has sought Environmental Clearance under EIA Notification, 2006 for the quarry project of an for an area of 3.7556Hectares in Survey No. 275/1A of Tripangottur Village, Thalassery Taluk, The project comes under Category B, Activity 1(a), (i) as per the Schedule of EIA Notification 2006 and as per O.M. No. L-11011/47/2011-IA.II (M) dated 18th May 2012 of Ministry of Environment and Forests. It is further categorized as Category B2 as per the O.M. No. J-13012/12/2013-IA-II (I) dtd. 24.12.2013 of Ministry of Environment and Forests, since the area of the project is below 25 hectares. As per gazette notification no SO 190(E)dtd 20/01/2016, Government of India and of Government India GO(Ms)no.05/2016/Envt Dtd 04/04/2016,Govt:of Kerala DEIAA and DEAC constituted for considering the applications for environmental clearance less than 5 hectares in individual cases and 25 hectares in cluster

The proposed project site falls within Latitude: 11°47'50.59"N to 11°47'59.02"N and longitude 75°40'41.61"E to 75°40'51.60"E". The land area consists of 3.7556hectares, which is private land. The lassification as per revenue records is

Page 1 of 5



Copy of Explosive



Copy of license from Gram Panchayat

PROCEEDINGS OF THE DIRECTOR OF MINING & GEOLOGY

- Sub: Mining & Geology Mines & Minerals Minor Minerals Granite Building Stone Quarrying Lease to Shri. Jovin George, Madathinamattathil House, Palisseri, Thalassery. P. O, Kannur District - 670 101 -sanctioned - orders - issued.
- Ref. 1. Application dtd. 21/02/2017 from Shri. Jovin George, Madathinamattathil House, Palisseri, Thalassery. P. O, Kannur District 670 101
 - Letter No. DOC/M-5353/2016 dtd. 30/08/2016 from the Geologist, District Office, Kannur
 Pro.order. No. 01/KNR/2017/DEIAA dtd. 22/05/2017 of the District Environment Impact Assessment Auhority, Kannur, Kerala
 - Kerala Minor Mineral Concession Rules, 2015.

No. 409/2017-18/8825/M3/2016/DMG

Dated, Thiruvananthapuram 04/10/2017

ORDER

A quarrying lease is granted to Shri. Jovin George, Madathinamattathil House, Palisseri, Thalassery. P. O, Kannur District – 670 101 to quarry Granite (Building Stone) over an area of 3.7556 Hectares of land comprised in Re - Sy. No. 275/1A of Tripangottur Village, Thalassery Taluk, Kannur District for 12 (Twelve) years from the date of execution of the quarrying lease deed under the Kerala Minor Mineral Concession Rules, 2015 and as per the survey map issued by the Tahsildar, Thalassery and the approved Mining Plan and environmental clearance submitted by the applicant subject to the under mentioned conditions.

- Royalty is payable to Government as per Rule 32 of the Kerala Minor Mineral Concession Rules, 2015 in respect of minor mineral quarried and moved out of the quarry subject to revision from time to time on the basis of amendments to the schedule I of the said Rules.
- Dead rent is realizable under 40(1)(d) of the said rules subject to revision from time to time on the basis of amendments to the said rules subject to revision from time to time surface rent realizable under 40(1)(d) of the said rules.
- Surface rent realizable under 40(1)(e) of the said rules will be equal to the land revenue
 assessed by the Revenue Department subject to revision from time to time on the basis of
 the land revenue.
- The lessee shall execute a quarrying lease deed within a period of six months from the date
 of this order in form 'H' as per Rule 43 of the Kerala Minor Mineral Concession Rules, 2015.
- The lessee shall also deposit an amount of Rs 10,000/- (Rupees Ten Thousand only) per hectare as security deposit for the observance of the terms and conditions of the lease duarrying operation only after the deed is executed and registered.
 The quarrying area shall be demonstrated as executed and registered.
- The quarrying area shall be demarcated and boundary stones fixed at the lessee's expenses before execution of the quarrying lease deed.
 The lessee shall not win and dispose of the lessee's expenses.
- The lessee shall not win and dispose of any type of dimension and decorative stones from the area over which the quarrying lease has been sanctioned on the strength of this order.
- The production of Granite (Building Stone) from the area covered under this grant shall be subject to the quantity specified in the Mining Plan submitted by the lessee and the same is restricted to 1,40,000 Metric Tonnes per year.
- 9. (i) The lessee shall erect a notice board in Malayalam at a prominent place with a minimum size of 1 metre X 1.5 metres in a metallic board near to the entrance of the quarry to the effect that it shall contain the name and address of the permit holder, mineral concession number and date, the mineral to extracted, permit number and date and its date of expiry, (if any), etc.
 - (ii) The lessee shall erect a warning board with danger sign regarding operation of the quarry,
 100 metres away by the side of the road leading to it.
- The lessee shall fence the lease area before the commencement of the quarrying operation for preventing accidents by failing of human beings, animals, vehicles or any materials into

y

The Secretary, Tripangottoor Panchayat, Thalassery Taluk, Kannur District, Kerala. Dt. 29/05/2017

Sub:- Environmental Clearance (E.C.) - Proposed Quarry Project at Re-Survey No. 275/1A, Tripangottur Village, Tripangottur Panchayat, Thalassery Taluk, Kannur District, Kerala -Submission of the E.C. Order - Compliance to the condition of Environment Clearance - Reg.

Respected Sir,

- This refers to the Environmental Clearance obtained to the proposed Quarry Project at Re-Survey No. 275/1A, Tripangottur Village, Tripangottur Panchayat, Thalassery Taluk, Kannur District, Kerala vide Order No. 1/KNR/2017/DEIAA dt. 22/05/2017.
- We hereby submit a self attested copy of the Environment Clearance Order No. 1/KNR/2017/DEIAA dt. 22/05/2017. This is in compliance to the condition of the E.C. Order.

Kindly acknowledge the receipt of the same.

Thanking you,

Jovin George

Yours respectfully,

Encl: As above

For Secretary Iriprangottoor Grama Panchaya B. P. O. Kallikkandi-670 693

Copy of Acknowledgement





TEST REPORT

Test Report No: TC540218000000879F	Date: 26.12.2018	Page 1 of 1
reac report No. 165452155555055	Date, 20.12.2010	rage rorr

	CUSTO	MER DETAILS	
	Name & Address	Mr. Jovin George Madathinamattathil Hot Palissery,Thalassery Kannur District	use
Customer Details	Survey No	275/1 A	4.5
	Village	Thripangotoor	
	Taluk	Thalassery	
	District	Kannur	
	State	Kerala	
Customer Reference		Test Request form dated 20.12.2018	
Monitoring Site		Narikottumala	
	SAMI	PLE DETAILS	3.1
Source of Sample	Ambient Air	Sample Code	TC540218000000879F
Location of Monitoring	South West Side	Sampled By	Laboratory
Date of Monitoring	20.12.2018	Test Started On .	24.12.2018
Sample Received On	24.12.2018	Test Completed On	26.12.2018
Humidity	60 %	Sampling Procedure	IS 5182 Part V & XIV

SL NO	TEST PARAMETER	TEST METHOD	UNIT	RESULTS	NAAQ STANDARD
01	Particulate matter (PM ₁₀)	IS 5182 Part 23: 2006 RA 2012	μg/m³	60.7	100
02	Particulate matter (PM _{2.5})	EPA 40 CFR Part 50 Appendix - L	μg/m³	19.5	60.0
03	Sulphur dioxide (SO ₂)	IS 5182 Part 2: 2001 RA 2012	μg/m³	< 2.00	80.0
04	Nitrogen dioxide (NO ₂)	IS 5182 Part 6: 2006 RA 2012	μg/m³	< 2.00	80.0

End of Report

For and on behalf of Standards Environmental & Analytical Laboratories

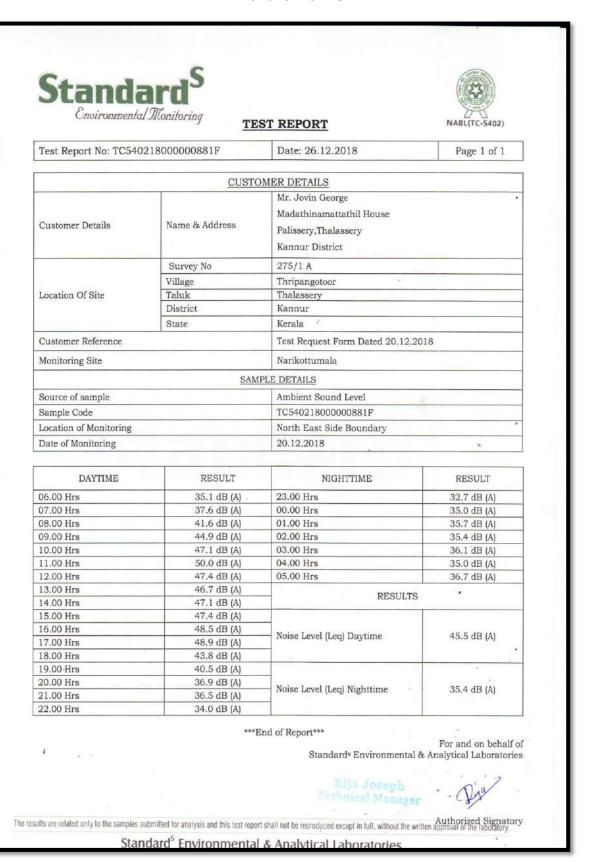
Authorized Signatory

Rija Joseph Technical Manage

The results are related only to the samples submitted for analysis and this test report shall not be reproduced except in full, without the written approval of the laboratory.

Standard^S Environmental & Analytical Laboratories

Result of ambient air



Result of Sound



TEST REPORT



Test Report No: TC540218000000880F Date: 26.12.2018 Page 1 of 1

	CUSTOMI	ER DETAILS		
Customer Details	Name & Address	Mr. Jovin George Madathinamattathil Hous Palissery,Thalassery Kannur District	ie	
	Survey No	275/1 A		
	Village	Thripangotoor		
Location of Site	Taluk	Thalassery	10	
	District	Kannur		
	State	Kerala		
Customer Reference		Test Request Form dated 20.12.2018		
Monitoring Site		Narikottumala		
	SAMPLE	DETAILS		
Sample Code	TC540218000000880F	Sample Received On	24.12.2018	
Sample Name	Water	Sampling Procedure		
Sample Description	Stream Water	Sampling Location	South East	
Identification By Customer		Sample Condition	Good	
Sampled On	***	Test Started On	24.12.2018	
Sampled By	Customer	Test Completed On	26.12.2018	

SL NO	TEST PARAMETER	TEST METHOD	UNITS	RESULT	ACCEPTABLE LIMIT (IS 10500 - 2012)
01	Colour	IS 3025 Part 4:1983 RA 2012	Hazen	1.00	5.00 (Max)
02	Odour	IS 3025 Part 5:1983 RA 2012		Unobjectionable	Unobjectionable
03	Turbidity	IS 3025 Part 10:1984 RA 2012	NTU	0.40	1.00 (Max)
04	рН	IS 3025 Part 11:1983 RA 2012		6.50	6.50 - 8.50
05	Total Dissolved Solids	IS 3025 Part 16:1984 RA 2012	mg/L	33.0	500 (Max)
06	Total Hardness (as CaCO ₃)	IS 3025 Part 21:2009 RA 2014	mg/L	10.1	200 (Max)
07	Calcium (as Ca)	IS 3025 Part 40:1991 RA 2014	mg/L	2,42	*75.0 (Max)
08	Magnesium (as Mg)	IS 3025 Part 46:1994 RA 2014	mg/L	< 1.00	30.0 (Max)
09	Chloride (as Cl)	IS 3025 Part 32:1988 RA 2014	mg/L	8.99	250 (Max)
10	Total Alkalinity (as CaCO ₃)	IS 3025 Part 23:1986 RA 2014	mg/L	7.88	200 (Max)
11	Iron (as Fe)	IS 3025 Part 53:2003 RA 2014	mg/L	0.19	1.00 (Max)
12	Sulphate (SO ₄)	IS 3025 Part 24:1986 RA 2014	mg/L	1,12	200 (Max)
13	Total Coliform Bacteria	IS 1622:1981 RA 2014		Absent/100 ml	Absent/100 ml
14	E coli	IS 15185: 2016		Absent/100 ml	Absent/100 ml

End of Report

For and on behalf of Standards Environmental & Analytical Laboratories

Vidhyalakshmi Das Microbiologist

Authorized Signatory

The results are related only to the samples submitted for analysis and this test report shall not be reproduced except in full, without the written approval of the laboratory.

Standard^S Environmental & Analytical Laboratorie

Result of Water

ചെറുവാഞ്ചേരി കർഷക - കർഷക തൊഴിലാളിക്ഷേമ സഹകരണ സംഘം ലമ്മ്യാഡ് നമ്പര സ്വ.1867	
"പ്ലാസ്സിക് രഹിത അടുക്കള – കേസിസർ തിമുക്ത ഗ്രാമം പന്ധതി"	
വിനെന62 <u>ളർമം കലാവി</u> രുന്നും 2018 ഒകോണർ 13 - 19	
No. Date:291418 (പ്രേഷ്ട്രത്തി ക്രോർത്തി	
70,000[.	7

കേരള പഞ്ചായത്ത് എംപ്ലോയീസ് ഓർഗനൈസേഷൻ സംസ്ഥാന കമ്മിറ്റി, രാജീവ് ഭവൻ, നീരാഴിലൈൻ, പുളിമൂട് ജംഗ്ഷൻ, തിരുവനന്തപുരം
രജി. നമ്പർ : GO(MS) 59/2006 LSGD
നമാൻ: 4506 രസീത് തീയതി: 24. 12-18
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പ്രവർത്തനഫണ്ട്;₹സംഭാവന ;₹.50,000 —
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നനിച്ചൂർവ്വം കൈഷറ്റിയിരിക്കുന്നു. '

തിറ 26a	ഹാത്സവം പായിലൂർ
പാറയുള്ളപറന	വ് കലശാഘോഷം
നമ്പർ. 379 ശ്രീ/ശ്രീമതി <i>C. Newsley, a.e.l</i> അവർകളിൽ നിന്ന് സംഭാവനയായി	Oranto Crushes Jove Cree
രൂപ നന്ദിപൂർവ്വം കിട്ടിബോധിച്ചു. 25/008/	സെക്രൂൻ

Receipts of CSR