

District Office,
Department of Mining & Geology,
Meenangadi, Wayanad.
Phone No: 04936 249124
e-mail: geo.way.dmg@kerala.gov.in
Date : 30.07.2018

No. DOW/M- 462/2018

From

The Geologist
Wayanad

To

Sri. Sudheesh.A.T.,
Adakkathottathil House,
Kumbleri.P.O.,
Wayanad

Sir,

Sub : Approval of eco-friendly Mining Plan- Granite Building Stone Quarry at
Re.Survey No. 115/13 of Padichira Village, Sulthan Bathery Taluk,
Wayanad District,Kerala- Reg.

Ref : (1) Your Application dated, 09.02.2018.
(2) The Kerala Minor Mineral Concession Rules,2015


Sir,

With reference to your application, vide Lr. No Nil dated 08.06.2018 for approval of Eco-friendly mining plan for the Granite Building Stone quarry project at Re.Survey Nos. 115/13 (Re.Survey Block No.2) of Padichira Village, Sulthan Bathery Taluk, Wayanad District, Kerala for an extent of 0.9246 hectares is hereby approved as per reference 2nd cited above with the following conditions and subjected to the renewal of quarrying permit.

1. That you will follow the prescribed Rules & Regulations of Central Government and State Government issued from time to time in regard to mining.
2. That you will follow the Mine Safety Rules & Regulations.
3. That you will store the mining waste in the earmarked location/dumping yard only as specified in the plan.
4. That you will carry out the plantation as committed in the plan.
5. That provision shall be made for the housing facility for the labour with all basic infrastructure facilities including safe drinking water, toilets etc, within in site.
6. That any modification in the scheme shall only be carried out with prior approval from the authority concerned.

Yours faithfully,




Geologist
GEOLOGIST
DISTRICT OFFICE
DEPT. OF MINING & GEOLOGY
MEENANGADI, WAYANAD - 673 591

MINING PLAN

(Including Progressive Mine Closure Plan)

Under Rule 53 of the Kerala Minor Mineral Concession Rule 2015

for

GRANITE BUILDING STONE QUARRY (Minor Mineral)

at

Survey No: 115/13

Approved Vide Letter No: DOW/M...462
Dtd. 30.7.2018

Village: Padichira,

Taluk: S.Bathery

District: Wayanad,

State: Kerala




SHELDJUMON T.M
Geologist
District Office
Dept. Of Mining & Geology
Mangudi, Wayanad- 673 591

Sri. SUDHEESH A.T

Adakkathothahil House, Kumbleri P.O., Wayanad -673591

Extent: 0.9246(2.2846Acres)

Production Capacity: - 80,939 TPA (Max)

Open Cast, Semi Mechanized Mining Method
Private Land

Prepared By



GLOBAL Environment & Mining Services

(Consulting Engineers, Mine Designers, Geologists & Surveyors)

#394 HBR Layout 5th Block, 5th Main, 1st Stage, 1st Cross

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H.O.

3rd Main Road, Basaveshwara Badawane

HOSPET - 583201, Bellary Dist. (Karnataka)

Sri. SUDHEESH A.T

Adakkathothahil House, Kumbleri P.O., Wayanad -673591
Ph No. : +91- 9947375014

UNDERTAKING

The Mining Plan including Progressive Mine Closure Plan for 'Granite Building Stone Quarry of Sri. Sudheesh A.T' over an extent of 0.9246(2.2846Acres) at Sy No. 115/13 in Padichira Village, Sultan Bathery Taluk, Wayanad District, Kerala State. Has been prepared by M/s. GLOBAL Environment & Mining Services, Bangalore.

We request the District Geologist, Department of Mining & Geology, Wayanad District, Kerala State to make further correspondence regarding the Mining Plan including Progressive Mine Closure Plan with the Recognized Qualified Person at the following address:

M/s GLOBAL Environment & Mining Services,
#394, 1st Stage, 1st Cross, 5th Main, 5th Block, HBR Layout
Bangalore – 560043,
Karnataka State, India.
Ph: +91 8025432447

H. O.
3rd Main Road, Basaveshwara Badawane
HOSPET – 583201, Bellary Dist. (Karnataka)

We hereby undertake that all the proposals made in the Mining plan including Progressive Mine Closure Plan by the Recognized Qualified Person are deemed to have been made with the knowledge and consent of me in all respects.

Place: S.Bathery
Date: 29.05.2018




Sri. Sudheesh A.T
Authorized Signatory

Sri. SUDHEESH A.T

Adakkathothahil House, Kumbleri P.O., Wayanad -673591
Ph No. : +91- 9947375014

CERTIFICATE

This is to certify that the Mining Plan including Progressive Mine Closure Plan for 'Granite Building Stone Quarry of Sri. Sudheesh A.T' over an extent of 0.9246(2.2846Acres) at Sy No. 115/13 in Padichira Village, Sultan Bathery Taluk, Wayanad District, Kerala State. Has been prepared in full consultation with me and I have understood its contents and agree to implement the same in accordance with the law.

Place: S.Bathery
Date: 29.05.2018


Sri. Sudheesh A.T
Authorized Signatory



Sri. SUDHEESH A.T

Adakkathothahil House, Kumbleri P.O., Wayanad -673591
Ph No. : +91- 9947375014

CERTIFICATE

"The provisions of Mines Act, Rules and Regulations made there under have been observed in Mining Plan including Progressive Mine Closure Plan for 'Granite Building Stone Quarry of Sri. Sudheesh A.T' over an extent of 0.9246(2.2846Acres) at Sy No. 115/13 in Padichira Village, Sultan Bathery Taluk, Wayanad District, Kerala State. and where specific permissions are required the applicant will approach the Director General of Mines Safety. Further, standards prescribed by DGMS in respect of miner's health will be strictly implemented".

Place: S.Bathery
Date: 29.05.2018


Sri. Sudheesh A.T
Authorized Signatory



Sri. SUDHEESH A.T

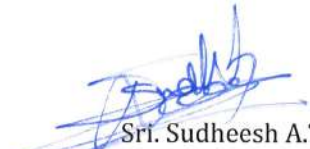
Adakkathothahil House, Kumbleri P.O., Wayanad -673591
Ph No. : +91- 9947375014

CERTIFICATE

This is to certify that the "Progressive Mine Closure Plan" in respect of Mining Plan for 'Granite Building Stone Quarry of Sri. Sudheesh A.T' over an extent of 0.9246(2.2846Acres) at Sy No. 115/13 in Padichira Village, Sultan Bathery Taluk, Wayanad District, Kerala State. complies and has taken in to consideration all statutory rules, regulations, orders made by the Central or State Government, Statutory Organizations, Court etc, and wherever any specific permission is required I will approach the concerned authorities.

I also give an undertaking to the effect that all the measures proposed in the closure plan will be implemented in a time bound manner as proposed.

Place: S.Bathery
Date: 29.05.2018


Sri. Sudheesh A.T
Authorized Signatory





GLOBAL Environment & Mining Services
(Consulting Engineers, Mine designers, Geologist & Surveyors)

#394, 1st Cross, 1st Stage 5th Main, 5th Block HBR
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Website : globalmining.in

H. O.
3rd Main Road, Basaveswara Badavane,
HOSPET – 583201, Dist., Bellary (Karnataka)

CERTIFICATE

1. Certified that provisions of Mines Act, Rules and Regulations made there under have been observed in the Mining Plan including Progressive Mine Closure Plan for 'Granite Building Stone Quarry of Sri. Sudheesh A.T' over an extent of 0.9246(2.2846Acres) at Sy No. 115/13 in Padichira Village, Sultan Bathery Taluk, Wayanad District, Kerala State and wherever specific permissions are required the applicant will approach Director General of Mines safety.
2. It is also certified that information furnished in the above mining plan including Progressive Mine Closure Plan are true and correct to the best of our knowledge.

Place: Bangalore

Date: 29.05.2018

GLOBAL Environment & Mining Services

Cyriac Joseph
Cyriac Joseph

DMG/KERALA/RQP/15/2018





GLOBAL Environment & Mining Services
(Consulting Engineers, Mine designers, Geologist & Surveyors)

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3rd Main Road, Basaveswara Badavane,
HOSPET – 583201, Dist., Bellary (Karnataka)

CERTIFICATE

This is to certify that the provisions of Mineral Conservation and Development Rules, 1988 have been observed in the Mining Plan including Progressive Mine Closure Plan for 'Granite Building Stone Quarry of Sri. Sudheesh A.T' over an extent of 0.9246(2.2846Acres) at Sy No. 115/13 in Padichira Village, Sultan Bathery Taluk, Wayanad District, Kerala State, and wherever specific permissions are required, the applicant will approach the concerned authorities of the Department of Mining & Geology, Kerala.

Place: Bangalore

Date: 29.05.2018

GLOBAL Environment & Mining Services


Cyriac Joseph
DMG/KERALA/RQP/15/2018



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SIMPLIFIED MINING PLAN FOR QUARRYING PERMIT**For "GRANITE BUILDING STONE QUARRY"****OF Sri. SUDHEESH A. T.****INTRODUCTION:**

Granite Building Stone is one of the most common rock types in the Geology of Kerala. It is a coarse grained plutonic rock containing over 95% quartz, feldspar and a small percentage of biotite, hornblende and other ferromagnesian minerals. Due to its hard nature and easy availability it is commonly used as a construction material and road material all over the state. The abundance of granite building stone and its growing demand has prompted the entrepreneur to apply for the mining in this area.

Sri. Sudheesh A.T., Adakkathothahil House, Kumblers P.O., Wayanad -673591, has proposed expansion of their mining operations (Granite Building Stone Quarry) in the area over an extent of 0.9246(2.2846Acres) for the production of granite building stone at Sy No. 115/13 in Padichira Village, Sultan Bathery Taluk, Wayanad District, Kerala State. The location of the proposed mine is shown on the The Survey Map showing the applied mining area is enclosed vide **Annexure -3**.

Now as a statutory requirement a Mining Plan (including Progressive Mine Closure Plan) showing systematic development of the mine and mining related proposals for next five years required to be prepared and submitted to the Geologist, Dept. of Mining and Geology Wayanad, Govt. of Kerala for approval. Hence a Mining plan is prepared for the period of 5 years for the maximum production of 80,939 Tonnes per annum and submitted to the District Geologist, Department of Mining & Geology, Wayanad, and Kerala for approval.

The Mining is proposed to be operated by developing benches of 5m height and 5m ultimate width by Opencast Semi-Mechanised Mining Method. The mechanised operation of mining includes an excavator, tippers, rock breakers, Jack hammer drilling and blasting.

The Mining Permit Area is prepared as per the requirements of the Kerala Minor Mineral Concession Rule (KMMCR) 2015, and is submitted to the District Geologist, Wayanad Kerala for approval.

The boulders and broken material from the mine would be transported to the local consumers, construction sites and / or to the crusher situated outside the lease area for further sizing.



Environment & Mining Services

1. GENERAL INFORMATION**1. (a). Name & address of the applicant :**

Sri. Sudheesh A.T.
Adakkathottahil House,
Kumbleri Post Wayanad
Kerala- 673591
Ph No. : +91- 9947375014

(b). Registered Office :

Sri. Sudheesh A.T.
Adakkathottahil House,
Kumbleri Post Wayanad
Kerala- 673591
Ph No. : +91-8547597292

(c). Status of applicant

Private Individual : Yes

The ID proof of **Sri. Sudheesh A.T.** enclosed as **Annexure - 6.**

(d). Name & address of RQP Preparing Mining Plan

Cyriac Joseph DMG/KERALA/RQP/15/2018
GLOBAL Environment & Mining Services HBR Layout 5 th Block, 5 th Main, 1 st Cross, 1 st Stage Bengaluru-560043, Karnataka e-mail : gems.blr@globalmining.in Mobile : +91-8025432447 H.O. 3 rd Main Road, Basaveshwara Badawane Hospet - 583201, Bellary Dist. (Karnataka)

The RQP certificate of Cyriac Joseph from Department of Mining & Geology is enclosed as **Annexure - 4.**



M/s. GLOBAL Environment & Mining Services

2. DETAILS OF THE APPLIED AREA:**2. (i). Name of the Mineral:** Granite**2. (ii). Description of the LOI(enclose copy of the sanction order)**

SL No	Village Name	Taluk	District & State	Sy. No	Status of land	Area	Remarks
1	Padichira	Sultan. Bathery	Wayanad, Kerala	115/13	Private	0.924 6Ha	LOI No: DOW/M462 / 2017 Dated:21.05.2018

The copy of the LOI is enclosed as **Annexure -5**. The detail of Possession Certificate is enclosed as **Annexure – 1.** , The Consent Letter is enclosed as **Annexure -7**

2. (iii). Infrastructure facilities

Infrastructure facilities	The office and structures required for other service including statutory requirement shall be constructed outside the mining permit area, which shall be dismantled at conceptual stage of mining.
Nearest railway station	Calicut -135 Kms
Police Station	Pulpally - 10.0Kms
Post Office	Kabanigiri - 2.0Kms
Fire & Safety office	Sulthan Bathery -38 Kms
Medical Facilities	Govt Hospital ,Padichira – 3Kms
Water & Electricity	Electricity board , Padichira 3.0Km Water board , Kabanigiri 2.0Km
Education Facilities	Govt LP School , Kabanigiri - 2.0 Kms
Mode of transportation of Mineral	Marakkadavu Dippo – Padichira Road,0.60Km (Private Road)



3. PHYSICAL & GEOLOGICAL CHARACTERISTICS OF THE AREA:**3.(i). Physiography & drainage:**

Mining Permit Area is located on the slope of the hillock gently dipping towards NW. The highest elevation in this area is 730.0m from MSL and the lowest elevation is 719.0m from MSL. The general slope of the Mining Permit area is between 5° to 6° degree. The general slope of the lease hold area is between 16° to 27° degree. The area has moderate climate with maximum temperature of 36.20C and minimum temperature of 17.0C. The area receives average rain fall of more than 2786mm.

3.(ii). Regional geology:

The district can be broadly divided into four geological domains viz., the Peninsula Gneissic Complex in the north and central part, ii) the Migmatite Complex in the southcentral part, (iii) the Charnockite Group in the south and (iv) the Wayanad Group in the north. Wayanad Group of supracrustal rocks include garnet-sillimanite-biotite gneiss with or without graphite, kyanite-fuchsite-muscovite-quartz schist, hornblende-biotite schist and gneiss+garnet, amphibolite bands, quartz-sericite schist/quartz-mica schist and meta ultramafites, representing upper amphibolite to lower granulite facies metamorphism. These rocks are found as linear bands in the north. The main member of this group garnet-sillimanite-biotite gneiss+graphite occurs as large bodies north of Kabani river. Peninsular Gneissic Complex represented by hornblende-biotite gneiss and pink granite gneiss occupies a major part of the district. Charnockite Group comprises charnockite forming the hilly terrain in the south and southeast. Pyroxene Granulite and banded Magnetite Quartzite occur as narrow bands within charnockite. Migmatite Complex is represented by biotite-hornblende gneiss, occurring over a large area in the south-central part. The other member of this group, namely garnetiferous quartz-feldspathic gneiss+sillimanite occur as narrow bands within the older charnockite. In the east, large bodies of intrusive pink granite occur near Muttill South and Sultan Battery. Pegmatite veins are also associated with the granites. Dolerite and gabbro are intrusive into the older rocks.

Local Geology:

The granite building stones are very well exposed in the old working pit, whereas part of area with lower elevation is covered by top soil of about 0 to 1.5m thickness,

A geological plan showing the granites and soil cover and the geological sections showing subsurface geology is prepared on 1:1000 scale and enclosed vide Plate No 2 & 3.

Table 3.1: Local Geology

Soil Cover	0 to 1.5m
Granite	35m (min. estimate)



4. RESERVE ESTIMATION:

4.(i). Method of estimation of reserve: For the estimation of geological & Mineable reserves the area is marked with sections A-A' to D-D' with the interval of 25m. The section wise sectional area is measured and multiplied by the influence to obtain the volume in m³. The volume is multiplied by 2.5T/m³ (BD) to calculate the resources of granite building stone in tonnes.

4.(ii). Geological Resources & Grades:**Table No:4.1: The Geological Resources.**

Section No	Area (m ²)	Influence (m)	Volume (m ³)	Tonnage (T) BD 2.5T/m ³	UNFC
A-A'	1041	43	44,763	1,11,908	332
B-B'	2231	25	55,775	1,39,438	332
C-C'	3808	25	95,200	2,38,000	332
D-D'	1156	34	39,304	98,260	332
Total			2,35,042	587,605	332

These reserves of granite building stones are estimated in the 332 category of UNFC codification

The general analysis of granite building stone is given in the Table 4.3

Table No 4.2: Analysis of granite building stone

Minerals*	Percentage %
SiO ₂	72.0
Al ₂ O ₃	13.1
Fe ₂ O ₃	01.5
FeO	01.8
MgO	00.6
CaO	01.5
Na ₂ O	03.5
K ₂ O	04.8
H ₂ O	00.7
TiO ₂	00.3
P ₂ O ₅	00.1

*Source: The Principles of Petrology by G W Tyrell



4.(iii). Mineable Reserves & anticipated life of the quarry:**a. Mineable Reserves:****Table No 4.3: Mineable Reserves**

Section No	Bench Level	Area (m ²)	Influence (m)	Volume (m ³)	Tonnage (T) BD 2.5T/m ³	UNFC
A-A'	725	125	35.5	4,438	11094	122
	720	166	35.5	5,893	14733	122
	715	126	35.5	4,473	11183	122
SUB TOTAL				14,804	37,009	122
B-B'	725	37	25	925	2,313	122
	720	256	25	6,400	16,000	122
	715	325	25	8,125	20,313	122
	710	271	25	6,775	16,938	122
	705	200	25	5,000	12,500	122
	700	141	25	3,525	8,813	122
SUB TOTAL				30,750	76,875	122
C-C'	725	99	25	2,475	6,188	122
	720	352	25	8,800	22,000	122
	715	568	25	14,200	35,500	122
	710	486	25	12,150	30,375	122
	705	416	25	10,400	26,000	122
	700	346	25	8,650	21,625	122
	695	326	25	8,150	20,375	122
SUB TOTAL				64,825	1,62,063	122
D-D'	720	130	26.5	3,445	8,613	122
	715	198	26.5	5,247	13,118	122
	710	198	26.5	5,247	13,118	122
SUB TOTAL				13,939	34,848	122
GRAND TOTAL				1,24,318	3,10,794	122

b. Anticipated life of the quarry:

The Geological resources of granite building stone in this area are **5,87,605 Tonnes** and mineral reserves are **3,10,974 Tonnes**. In the Five years of plan period totally **2,96,919 Tonnes** granite building stone/ aggregate shall be quarried. It is envisaged to convert this proposed mining permit into a Mining Lease area after purchase of additional land adjacent to the proposed Mining Permit area. The balance mineral reserves will be mined only after this Mining permit area is converted to Mining Lease area . Thus the life of the mine is about 6 years.



4.(IV). Number of existing pit, if any , their dimensions and location:

This is a working area. The size of the pit in this mine is 41m in length and 7m in width. It is located in the Sy. No. 115/13 in Padichira Village, Sultan Bathery Taluk, Wayanad District, Kerala State.



5. MINING METHODS:

5.(i). Details of mining machinery development & their specification:

a. Drilling Machines

During this mining plan period, the maximum production is estimated about 80,939 Tonnes in 1-year. The drilling and blasting in granite building stone is 100%. It is proposed to drill with jackhammer with 33/48mm dia bit. The calculations for required no of drilling units are given below.

Total material handled (max.) per annum shall be 80,939

Hole depth	--	1.5 m
Burden	--	1.m
Spacing	--	1.5m

Therefore the drilling machine required per year is calculated as under:

Rock broken / hole of 1.5 m depth

Spacing x Burden X Depth x efficiency x B.D. (2.5T/m³)

1m x 1.5m x 1.5m x 80% X 2.5 BD=4.5 Tonnes

Therefore, rock broken/m = 4.5 Tonnes/1.5 m = 3 Tonnes /m

Drilling meter age required/yr = $\frac{80,939}{3} = 26,979.67\text{m}$

Therefore drilling required per day = $26,979.67/240 \text{ days} = 112.4/\text{day}$

The jack hammer can drill about 50m per shift.

Hence the number of jack hammer drill units required = $(112.4/\text{day}) / 50\text{m each}$
= 2.25units

Considering 80% availability number of units required = $(2.25 \times 20\%) + 2.25 = 2.70$

Additionally 1 Jackhammer shall be used as spare.

Hence 4 units of jack hammer are required for drilling and blasting in this area for single shift. Considering the working single shift from 6am to 1pm totally 4 jack hammer drill units are required.



Table No. 5.1: Requirement of Jack Hammer Drilling Machines

Type	No's	Dia. of hole (mm)	Make	Motive Power
Pneumatic Jack Hammer Drill	4	33/48	Atlas Capco	Diesel

b. Loading Equipment

During this mining plan period, the maximum handling estimated is about 87,734 Tonnes in I-year. Out of which 80,939 Tonnes granite building stone and 6795 tonnes of top soil.

So, total handling per day $87,734/240\text{days} = 365.56\text{tonnes}$

Total handling of 365.56 tonnes per day (for 240 working days) shall be loaded in the tippers by excavator. The loading capacity of excavator PC 220 in such terrain is 125 Tonnes /hour.

The calculations of the excavators require are given below.

Tonnage proposed to be handled per hour

$= 365.56 \text{ Tonnes} / 7\text{hours} = 52.22\text{tonnes}$

No. of Excavator

One excavator can handle 125 tonnes/hour in such terrain. And hence considering 80% availability, 1 excavator can handle 100 tonnes/hour.

Thus one 1 excavator can make (100 X 7 hours) seven hundred tonnes per day

So to handle 52.22 tonnes, we require 0.52 No. of excavators.

Hence Number of excavators required is 1.

Table No 5.2: Requirement of Loading Equipment.

Type	No's	Capacity	Make	Motive Power
Excavator	1	1.2m ³ bucket capacity	Tata Hitachi 220	Diesel

c. Haulage and Transport Equipment**Material Handling**

Totally 87,734 material shall be handled in the I-year. Out of that 80,939 tonnes granite building stone shall be transported to the crushing and screening plant outside the mining permit area and 6,795 tonnes of top soil to be transported to buffer zone where plantation to be carried out.

The requirements of the tippers to handle this material is calculated below

Total Handling / day = $87,734 / 240\text{days} = 365.5\text{tonnes}$



No of tippers = $(365.5 / 10 \text{ tonnes per trip} / 3 \text{ trips per hour} / 7 \text{ hour effective shift})$
= 1.74 units

Considering 80% efficiency No. tippers required will be = 2.1

Additionally 1 tippers shall be used as spare

Hence three tippers are required for mining

The requirement of the transport equipment is given in the Table No 5.3

Table No 5.3: Requirement of transporting equipments

Type	No's	Size/ Capacity	Make	Motive Power	H.P
Tipper	3	10 tonnes	Tata	Diesel	97

d. Transport from mine head to the destination

The broken material would be directly transported to the crusher outside the quarry by the same tipper. No additional tippers are required for the transportation.

e. Miscellaneous:

Describe briefly any allied operations and machineries related to the mining of the deposit not covered earlier operations

For afforestation one water tankers with spraying arrangement shall be deployed.

The details of the equipment required for miscellaneous is given in the Table No 5.4.

Table No. 5.4: Requirement of the equipments for miscellaneous

Type	Nos.	Size/Capacity	Make	Motive Power
water tanker	1	8000	Tata	Diesel
Jeep	2	1+4	Mahindra	Diesel



5.(ii). Blasting and explosive:

BLASTING			
1.	Burden x Spacing x Depth	:	1m X 1.5m X 1.5m depth
2.	Number of holes	:	10
3.	Dia of holes	:	33 mm
4.	Depth of each hole	:	1.5m
5.	Explosives to be used	:	Cartridged Slurry explosives
6.	Powder factor	:	3 Tonnes/kg
7.	Consumption of explosives per year	:	80,939Tonnes / 3 tonnes/kg powder factor =26,979.66kg

i. Blasting Pattern :

In case of jack hammer the blasting pattern shall be staggered, however, it would vary depending on the rock condition.

ii. Manner and sequence of firing:

In case of jack hammer the blasting pattern shall be staggered, however, it would vary depending on the rock condition. The rock shall be blasted and sequenced using delay detonators for least vibrations & fly rock.

a) Type of explosives used/to be used

Cartridged Slurry explosives shall be used for the blasting.

b) Powder factor in ore and overburden/ waste / development heading / stope.

3 Tonnes / kg

c) Whether secondary blasting is needed, if so, describe in brief :

No secondary blasting shall be undertaken. Rock breaker shall be used to Break down the bigger boulders.

d) Storage of explosives (like capacity & type of explosive magazine) :

There is no explosive magazine within the mining area.



5. (iii). Proposed method of mining:

Opencast Mines: In these Five years plan period the mining is proposed by opencast semi-mechanized mining method and the sequence of mining shall be as given under,

- The top soil shall be recovered and transported to the safety barrier area for utilizing the same for afforestation / green belt development.
- After exposing the granite building stone, drilling shall be done by jack hammer.
- The blasting shall be carried out by Cartridge Slurry explosives.
- The rock breakers shall be used to break the oversize boulders left after blasting.
- The blasted material and the broken material by rock breakers of size 150mm to 250mm shall be loaded to the tippers by excavator and transported to the crushing and screening plant located outside the Mining Permit Area.
- The excavated material shall be transported to the crushing and screening plant located outside the mining permit area for crushing and sizing. The sized product shall be supplied to the consumer mainly for building construction and infrastructure development.

5. (IV). Proposed year- wise development for Five year**I-Year : -**

The mining in the I-year shall be done on the section A-A' to D-D'. It is proposed to develop two benches of 5m height & 5m width to produce 80,939 T granite building stones. The simultaneous recovery of waste is expected to be 6795 T. At the end of I-year the size of the pit shall be 73m in length & 89m in width. The mining operation shall be reach to the level of 720mMSL.

II-Year : -

The mining in the II-year shall be done on the section A-A' to D-D'. It is proposed to develop three benches of 5m height & 5m width to produce 80,113 T granite building stones. The simultaneous recovery of waste is expected to be 150T. At the end of II-year the size of the pit shall be 73m in length & 89m in width. The mining operation shall be reach to the level of 715mMSL.

III-Year : -

The mining in the III-year shall be done on the section A-A' to C-C'. It is proposed to develop four benches of 5m height & 5m width to produce 60,430 T granite building stones. The simultaneous recovery of waste is not expected in III-Year. At the end of III-year the size of the pit shall be 73m in length & 89m in width. The mining operation shall be reach to the level of 710mMSL.



IV-Year :-

The mining in the IV-year shall be done on the section B-B'- C-C'. It is proposed to develop five benches of 5m height & 5m width to produce 60,430 T granite building stones. The simultaneous recovery of waste is not expected in IV-Year. At the end of IV-year the size of the pit shall be 73m in length & 89m in width. The mining operation shall be reach to the level of 705mMSL.

V-Year :-

The mining in the V-year shall be done on the section C-C'. It is proposed to develop seven benches of 5m height & 5m width to produce 15,000 T granite building stones. The simultaneous recovery of waste is not expected in V-Year. At the end of V-year the size of the pit shall be 73m in length & 89m in width. The mining operation shall be reach to the level of 695mMSL.

The mining shall be done by developing the benches of 5m height with 5m ultimate width. At the end of fifth year of mining totally there shall be 7 benches developed in this mine. The level of the bottom most bench shall be 695MSL. In these five years of the plan period a pit 73m in length & 89m in width shall be formed.

The year wise (of all the Five years) pit design is shown on the Production & Development Plan enclosed vide **Plate 4A to 4E** and the year wise movement of the benches is shown on the Production & Development Sections enclosed vide **Plate No 5**.

Table No. 5.5. Year-wise calculations of granite building stone production

Year Wise	Section No	Bench Level	Area (m2)	Influence (m)	Volume (m ³)	Tonnage (T) BD 2.5T/m ³
I-Year	A-A'	725	125	35.5	4,438	11,094
		720	166	35.5	5,893	14,733
	B-B'	725	37	25	925	2,313
		720	256	25	6,400	16,000
	C-C'	725	99	25	2,475	6,188
		720	352	25	8,800	22,000
	D-D'	720	130	26.5	3,445	8,613
SUB TOTAL					32,376	80,939
II-Year	A-A'	715	126	35.5	4473	11183
	B-B'	715	325	25	8,125	20,313
	C-C'	715	568	25	14,200	35,500
	D-D'	715	198	26.5	5,247	13,118
SUB TOTAL					32045	80113
III-	A-A'	710	271	25	6,775	16,938



Year	B-B'	710	486	25	12,150	30,375
	C-C'	710	198	26.5	5,247	13,118
SUB TOTAL					24,172	60,430
IV-Year	B-B'	705	200	25	5,000	12,500
		700	141	25	3,525	8,813
	C-C'	705	416	25	10,400	26,000
		700	210	25	5,250	13,125
SUB TOTAL					24,175	60,438
V-Year	C-C'	700	136	25	3,400	8,500
		695	104	25	2,600	6,500
SUB TOTAL					6,000	15,000
Total Production for 5 Years					86,723	296,919

The Year wise movement of the benches in pit during the five year mining is shown on the production and development plan enclosed vide **Plate No – 4A to 4E** respectively.

5(v.) Proposed rate of Production when the mine is fully developed:

It is proposed to produce **80,939T** in **First Year**.

Table No. 5.6 Year-wise generation of top soil/wastes

Year Wise	Section No	Area (m2)	Influence (m)	Volume (m ³)	Tonnage (T) BD 2.0T/m ³
I-Year	A-A'	20	35.5	710	1420
	B-B'	26	25	650	1300
	C-C'	55	25	1,375	2750
	D-D'	25	26.5	663	1325
SUB TOTAL				3,398	6795
II-Year	C-C'	3	25	75	150
SUB TOTAL				75	150
Total Production				3473	6945

The summary of the production and development of waste is given in the Table No 5.7

Table No 5.7: Summary of the production and development

Year	Production (T)	Top Soil (T)	Total Handling (T)	Ratio
I-Year	80,939	6795	87,734	1:0.07
II-Year	80,113	150	80,263	1:0.00
III-Year	60,430	-	60,430	1:0.00
IV-Year	60,438	-	60,438	1:0.00
V-Year	15,000	-	15,000	1:0.00
Total	2,96,919	6945	3,03,865	1:0.02



5.(vi.) Conceptual Mining Plan:

At conceptual stage there shall be single pit in this area with 7 benches of 5m height and 5m width. The pit at conceptual stage shall have 73m in length & 89m in width and it shall be developed upto 695m MSL level. The overall pit slope shall be maintained at less than 45°.

The entire pit at the conceptual stage shall be converted into rain water pond. The pit shall be properly fenced with single opening for drawing the water. The pit shall also be developed for pisciculture with good local bio-diversified vegetation.

Totally 6945 Tonnes top soil shall be recovered and 2,96,919 Tonnes granite building stone shall be generated in the first five years of the plan period. The top soil shall be stacked at the safety barrier area and shall be used for Afforestation/Green belt development.

5.(vii). Safety precautions:**1. Safety & Security:**

- a. Proper and adequate security at the entrance to the mine shall be established to prevent entry of unauthorized person with proper gates under lock.
- b. Unauthorized entry to the permit area will be restricted strictly
- c. The top of the pit shall be fenced
- d. All the employees shall be provided with personal protective equipment (Shoe, helmet, etc)
- e. The stability of the benches and the strata will be examined regularly by a competent person
- f. Blasting will be carried out only during specified timings within the day light hours .
- g. All the above will be examined by Manager once in a week to ensure that they are in order.

In case of any eventuality the following person will be available for contact.

'Granite Building Stone Quarry' of Sri.Sudheesh A.T

Adakkathottahil House,
Kumbleri Post Wayanad
Kerala- 673591
Ph No. : +91- 9947375014



5.(viii). Mine Drainage

a) Likely depth of water table based on observations from nearby wells and water bodies:

The mine is located at higher elevation on hill and the water table in the mine is about 50m below the general surface.

b) The deepest workings expected to reach.

The expected deepest mining operation shall be about 695m MSL, which will be much above the ground water table.

No river or any water body passes through the proposed area .

c) Quantity and quality of water likely to be encountered, the pumping arrangements and places where the mine water is finally proposed to be discharged.

No ground water would be encountered during mining.



6. EMPLOYMENT POTENTIAL & WELFARE MEASURES:**6(i). Employment Potential:**

The list of the staff and workmen employed in the mine is given Table No 6.1

Table No 6.1: Requirement of workmen & staff

Sl. No	Particulars	No's
1	Highly Skilled	1
2	Skilled	2
3	Semi-skilled	8
4	Un-skilled	10
	Total	21

One Mines Manager cum Engineer shall be in-charge of the site operations

6(ii). Welfare Measures :

The site services at mine shall take care of the workers requirements of food, shelter, water, emergency first aid services as well as equipment maintenance services.

The following statutory and administrative facilities shall be made available near the mine site.

- Rest Shelter
- First Aid Station
- Latrines/Urinals
- Canteen
- Water supply for drinking purposes

The above site services shall be provided outside the mining permit area.



**7. MEASURE TAKEN & TO BE TAKEN FOR LAND RESTORATION,
RECLAMATION & PLANTATION IN OR NEARBY QUARRY AREA:****7.(i). Reclamation:**

The mining operations during these five years plan period is planned upto 695 m MSL. At conceptual stage the pit shall be developed for pisciculture with good local bio-diversified vegetation. A garland drain shall be made all around the mine to divert the water away from the pit through Silt Settling Tank (SST). The clarified water from Silt Settling Tank (SST) shall be directed to Rain Water Harvesting Pond (RWHP). The over flow from the Water Harvesting Pond (RWHP) shall be released to natural water course.

7.(ii). Plantation :

0.2780Ha area earmarked for safety barrier shall be developed as green belt by planting minimum but not limiting to 450 local species. Till conceptual stage totally 0.2780Ha area shall be covered under green belt. Apart from this Afforestation shall be done on the haulage road by planting 150 saplings.

The afforestation program is given in the Table No 7.1

Table No 7.1: Afforestation program

Year	No of Plants	Green Belt area covered	Location
I-Year	125 saplings	0.0556Ha	Green belt area & Haulage Road
II-Year	125 saplings	0.0556Ha	
III-Year	125 saplings	0.0556Ha	
IV-Year	125 saplings	0.0556Ha	
V-Year	125 saplings	0.0556Ha	
	600saplings	0.2780Ha	



8. MEASURE TAKEN & TO BE TAKEN FOR PROTECTION OF ENVIRONMENT IN AND AROUND THE QUARRY AREA:

A safety barrier area of 7.5m from the boundary shall be developed as green belt area by planting the local species. At conceptual/Mine Closure stage the working pit shall be developed for pisciculture with good local bio-diversified vegetation. Totally 0.2780Ha safety barrier area shall be used for green belt. Apart from this the plantation shall be carried out outside the mining permit area along haulage road.

A garland drain is proposed all along periphery of mining area to prevent the entry of rain water in the pit. The water from garland drain shall be diverted to Silt Settling Tank (SST) & Rain Water Harvesting Pond (RWHP) before releasing to natural water course.

During mining the main source of air pollution is expected to be drilling, blasting and transportation. The regular sprinkling of water on haulage road with water tanker and stopping drilling and blasting during high wind shall drastically reduce impact on air.

The requirement of water for the purpose of drinking, dust suppression by water tanker and afforestation as given in Table No 8.1

Table.No.8.1 Requirement of water

Purpose	Qty Required m ³ /day
Drinking water & Domestic	2
Afforestation	6
Dust suppression by water tanker	10
Total	18*

*Water for dust suppression and afforestation may not be required for four to five months during the monsoon. The water shall be brought from old abandoned quarries and borehole located outside the mining permit area.

Table No. 8.2 .Environment Management Schedule

YEAR	I-Year	II-Year	III-Year	IV-Year	V-Year
Greenbelt					
Garland drain					
Afforestation					
Environmental Monitoring					
Water spraying on haul roads					



9. MEASURE TAKEN & TO BE TAKEN FOR DUMPING OF OVERBURDEN STACKING OF TOP SOIL AND UTILIZATION OF TOPSOIL

As there is no overburden / waste other than top soil, the year wise and section wise generation of topsoil is given in the Table No 9.1

Table 9.1 details of the waste generation

Year Wise	Section No	Area (m ²)	Influence (m)	Volume (m ³)	Tonnage (T) BD 2.5T/m ³
I-Year	A-A'	20	35.5	710	1,420
	B-B'	26	25	650	1,300
	C-C'	55	25	1,375	2,750
	D-D'	25	26.5	663	1,325
SUB TOTAL				3,398	6,795
II-Year	C-C'	3	25	75	150
SUB TOTAL				75	150
Total Production				3,473	6,945

a) Land chosen for disposal of waste with proposed justification.

The topsoil recovered during mining shall be used for afforestation / green belt development in the earmarked 0.2780 Ha safety barrier area.

b) Attach a note indicating the manner of disposal, and configuration, sequence of buildup of dumps along with the proposals for the stacking of sub-grade ore to be indicated item wise.

No overburden / waste or sub grade is going to generate during the mining plan period.



10. MEASURE TAKEN & TO BE TAKEN FOR THE CONTROL OF WATER, NOISE, & AIR POLLUTION

10.(i). Details of pollution due Air, Noise & Water

10.(i).a. Ambient air quality

The air quality in the area mainly depends on the nature & concentration of emissions and meteorological conditions. The major air pollutants include:

- Particulate Matter (Dust) of various sizes
- Gases, such as, Sulphur Dioxide, Oxides of Nitrogen, Carbon Monoxide etc. from vehicular exhaust.

Dusts are the single largest air pollutant observed in this area. Diesel operating vehicles produces NO_x, SO₂ and CO emissions, usually at low levels. Dust can be a significant nuisance to surrounding land users and potential health risk in some circumstances. Dust is produced from a number of sources and through number of mechanisms such as

- Land clearing,
- Overburden removal,
- Crushing & screening,
- Loading & unloading of material on site &
- Subsequent transport off the site etc.

The detected ambient air quality is given in the Table 10.1

Table No 10.1: Detected AAQ in core & buffer zone.

Area	Sample Code	PM 10 µg/m ³	PM 2.5 µg/m ³	SO ₂ µg/m ³	NO _x µg/m ³
Core Zone	A1	40.85	14.66	8.46	6.04
Marakkadavu	A2	35.76	8.54	8.16	7.88

The Environment monitoring data is enclosed as **Annexure – 9**.

10.(i).b. Noise levels:

The noise level with in the core area is 37.0 to 55.0dB(A) where as in buffer zone it is 33.0 to 53.0dB(A) during day time. The impact of mining on the ambient noise level would be hardly noticeable in nearby villages, as the nearest habitant Marakkadavu Village is located at 0.77 Km away from the mine.



The detected noise level is given in the Table 11.5

Table No 10.2: Detected noise level in core & buffer zone.

Area	Sample Code	Max dB(A)	Min dB(A)
Core Zone	N1	54.0	37.0
Marakkadavu	N2	53.0	35.0

The Environment monitoring data is enclosed as **Annexure – 9**.

10.(i).c. Water Quality:

There is no water regime of any importance in the mining area. Drinking water is made available through bore wells. This water is being used for drinking purpose from many years. In buffer zone the minimum pH value of water is detected as 7.242 in Marakkadavu village, total dissolved solids detected minimum 50.4mg/l in Marakkadavu,. The total hardness of water is detected minimum 20.0mg/l in Marakkadavu. The Environment monitoring data is enclosed **Annexure – 9**.

10.(ii). a. Air Quality

The quality of air in Permit area would be deteriorated to certain extent due to drilling, blasting and transportation of the rock produced. However, the following environment control measures and the mitigating measures to control air pollution due to mining operations shall be undertaken, so that the pollution levels are maintained well within the permissible limits.

CONTROL MEASURES:

A. QUARRYING

- Dust suppression systems (water spraying) would be adopted at mine working & loading points.
- Wet Drilling shall be Practiced to reduce dust generation.
- Speed control on vehicle movement, to limit speed.
- The blasting shall be carried out during day hours, it shall be avoided during strong wind and temperature inversion condition.
- Excavation operations shall be suspended during very strong wind condition.
- Wind reduction control by plantation. Trees and shrubs will be grown along the Green belt area/safety barrier area along the periphery of the quarry and along the haul roads.
- Plantation of wide leaf trees, creepers and tall grass along approach roads, and around hillock will help in to suppress the dust.



- Proper tuning of excavators and compressors will be ensured to keep the gas emissions from the vehicles within the prescribed norms of the CPCB and MoEF guidelines.
- All workers shall be provided with personal protective devices eg. Dust Mask, Goggles, Helmet, etc.

10.(ii). b. Water Quality

There is no water source of perennial type passing through the area. The Permit area is located at higher elevation on the hillock and here the ground water level is more than 50-60m below the general surface on the lowest portion. Hence no ground water would be encountered during mining as the mining is proposed to extend up to only 25m depth from the lowest level of the Permit area. Hence there shall not be any impact on water quality. Also granite building stone being a very stable material and is not hazardous material does not affect the water quality. The following mitigating measures for the surface run offs has been incorporated.

MITIGATING MEASURES:

The following mitigation measures are suggested for water management and water pollution control.

- Garland drains shall be constructed all along the periphery of the quarry. The garland drain shall be routed through Silt Settling Tank (SST) to remove suspended soils and the overflow water shall be discharged to natural water course. A Rain Water Harvesting Pond (RWHP) is also envisaged for the use of the surface water. The SST & RWHP Pond is proposed in the NW of the Mining Permit area.
- Settling tanks and drains shall be periodically de-silted.
- Providing sufficient gully checks to check any silt flowing along with the surface run-off during monsoon.
- No toilet is planned within the mine area. However the toilets built at the site office, shall be provided with septic tanks to handle the sewage from the same.
- The quality of the water in the surrounding area and the Pre & Post monsoon water quality shall be monitored to track any changes or contamination in the water quality.
- The working of quarry at present shall be restricted at 295m above MSL at conceptual stage of quarrying, which is much above the ground water level.



10.(ii). c. Noise Levels

The noise level with in the core area is 37.0 to 55.0dB(A) where as in buffer zone it is 33.0 to 53.0dB(A) during day time. The impact of mining on the ambient noise level would be quite insignificant, in the nearby villages as the nearest habitants are beyond 56m from the boundary of the mining Permit area and human settlements are in Marakkadavu Village is located at 0.77 Km away from the mine.

➤ Control Measures:

- Identification of mitigation measures for noise abatement for both point sources and line sources are undertaken and measures to minimize the impact is proposed.
- The equipments and machines shall be maintained properly. Particular attention shall be given to the silencers and mufflers.
- Use of sharp drilling bits, delivery of compressed air at optimal pressure and proper maintenance of compressor, drilling machine, jackhammers and tipper trucks.
- Limiting the speed of empty haulage vehicles/tippers to a moderate level to prevent undue noise.
- In addition to it, Green belt development shall be undertaken around the quarry Permit area to minimize propagation of noise.
- Provision of rotation of workers to minimize exposure time as well as provision of earmuffs to workers exposed to high noise areas is also envisaged.
- Regular monitoring of noise level shall be done within the core zone and the buffer zone of the mining permit area.

Vibration levels (due to blasting)

The drilling is proposed by jack hammer with 33mm/48mm dia. The blasting shall be done sequentially. Due to very small diameter hole blasting, the vibration in this area shall well within the permissible limits. Delay shall be used for blasting keeping the vibration to minimum with least fly rock.

Thus the vibration would not be of significance as the nearest habitants are beyond 56m from the boundary of the mining permit area and human settlements are in Marakkadavu Village is located at 0.77Km away from the mine.



Control Measures:

VIBRATION & NOISE MITIGATION MEASURES (BLASTING PRECAUTIONS):

- Only small diameter drill holes of 33/48mm diameter with 25mm diameter cartridge slurry/ emulsion explosives shall be used for blasting, no large diameter holes are proposed for the blasting. With optimum blast design, effective blasting techniques with delay detonators and low charge per delay, care shall be taken to limit the blast vibrations and the PPV below 10mm per second, i.e. within the permissible limits, vide DGMS circular 7 of 1997.
- Each blast would be is carefully planned, supervised, executed and observed by qualified Blasters.
- Design of optimum blast hole geometry i.e. burden, spacing, Blast hole layout pattern, inclination and depth considering, burden, nature of the rock, safe working space, fragmentation size, etc., to keep the flyrock, noise and ground vibrations at the minimum.
- Blasting shall be done using appropriate delay detonators to keep the noise and vibration at the minimum levels.
- Proper sequencing of the blast so as to keep the vibration, noise and flyrock to the minimum levels.
- The appropriate Charge per delay shall be regulated to keep the PPV below 10mm/ sec as per DGMS Circular 7 of 1997
- The holes shall be proper stemmed and the stemming of each hole shall be checked by the qualified blaster to avoid 'blown thorough' holes, that is one of the major source of noise and Airblast during primary blasting.
- No secondary blasting like Pop Shooting or Plaster Shooting shall be undertaken for breaking down large boulders so as to avoid Airblasts and Fly rocks. Only rock breakers will be used for breaking down the bigger boulders.



M/s. Environment & Mining Services

11. OTHER INFORMATION

Table No. 11.1: Recurring Annual Cost for Environmental Protection

Sl. No.	Particulars	No.	Cost (Lakh Rs.)
I	Pollution Control		
1.1	Water spraying		6.00
1.2	Green belt development	Avg. 125plants	0.60
1.3	Personal protective equipment	25	0.50
1.4	Quarterly monitoring		2.00
	Total		9.10
2	Corporate Social Responsibility		3.00
	Total		12.10

The annual cost for environment protection / environmental improvement and CSR activities are envisaged as Rs. 12.10 lakhs and the specific environmental protection cost per year is nearly Rs 20.3/- per tonne of granite building stone.

11.(i). Financial Assurance:

At the end of five year the mining plan period 0.9246Ha. (2.2846 Acres) area shall be used for mining and green belt development activities. The financial assurance of Rs 1,00,000/- shall be given as a bank guarantee to Directorate of Mining & Geology after confirmation. The detail breakup of the land is given in Table No 11.2.

Table No. 11.2: Details of Broken up area at the end of progressive stage

Sl. No.	Head	Area Put On Use at start of plan (in Ha)	Additional requirement during plan period (in Ha)	Total (in Ha)	The area considered as fully reclaimed & rehabilitated (in Ha)	Net area considered for calculation (in Ha)
1	Area under mining / mining activities	0.0911	0.5555	0.6466	-	0.6466
2	Safety Barrier/Green belt	-	0.2780	0.2780	-	0.2780
3	Overburden / dump/ tailing dump	-	-	-	-	-
4	Infrastructure (work shop, office, etc)	-	-	-	-	-
5	Roads	-	-	-	-	-
6	Storage of top soil	-	-	-	-	-
7	Mineral separation plant	-	-	-	-	-
8	Afforestation on dump	-	-	-	-	-
9	Others to specify	-	-	-	-	-
	Total	0.0911	0.9246	0.9246	-	0.9246
	Virgin area	0.8335	-	-	-	-
	Total Mining Permit Area	0.9246	0.9246	0.9246	0.9246	0.9246



12.0 Certificate:

Enclosed

12.0.1 Plans and Sections:

Plans and sections are enclosed.

GLOBAL Environment & Mining Services


Cyriac Joseph
DMG/KERALA/RQP/15/2018





SHELJUMON T.M
Geologist
District Office
Dept. Of Mining & Geology
Manangadi, Wayanad- 673 591

ANNEXURE



FORM 12 C
(See Rule 3)



GOVERNMENT OF KERALA
PADICHIRA VILLAGE OFFICE
POSSESSION CERTIFICATE

No. 29069049

Date: 24/11/2017

Name of Person to whom certificate is issued	MANUEL P V
Name of Father	VARKEY
Address	PANAMTHOTTATHIL, 326, KABANIGIRI
Post Office with PIN Code	KABANIGIRI, 673579
District	Wayanad

Certified that land shown in the schedule below are in possession and enjoyment of the person

Taluk / Village	Old Survey No	Re-Survey Block	ReSurvey No	Extend in Ha	Thandapper	Class of Land
SulthanBathery/ Padichira		2	115/13	1.7362	3640	d

Certificate Issued Date	24/11/2017
Designation of the Issuing officer	Village Officer
Purpose for which the certificate is issued for	MINING AND GEOLOGY MEENANGADI

This certificate is issued based on the details given in the application, local enquiry, facts and records produced.



Security Code : 71EB2

Signature valid

Digitally signed by JOSEPH T D
Date: 2017.11.24 11:17:12 IST

NOTE:

1. This digitally signed document is legally valid as per the Information Technology (IT) Act, 2000.
2. Authenticity of this document can be verified from <http://edistrict.kerala.gov.in/> and submitting the Certificate Number and Security code. Alternatively, please call the numbers 155300(from BSNL landline), 0471155300(from BSNL mobile), 04712335523/04712115094/04712115098(from other networks) and quote the Certificate Number to the operator



കേരള സർക്കാർ

രസീത്

തണ്ടപേർ നമ്പർ 3640 അനുസരിച്ച് കരം ഒടുക്കിയതിന് രസീത്



ജില്ല: വയനാട്

താലൂക്ക്: സുൽത്താൻ ബത്തേരി

വില്ലേജ്: പാടിച്ചിറ

KL12021010848/2017

ബ്ലോക്ക്: 002

സ്ഥലം നമ്പർ സബ് ഡിവിഷൻ നമ്പർ ലോട്ടറും	വിസ്തീർണ്ണം			പട്ടാഭാരതയോ പട്ടാഭാരതയോടൊ പേര്	ഒടുക്കിയ സ്വഭാവം	പണം ഒടുക്കിയ ആളിന്റെ പേര്	ഏത് കാലത്തേ ക്കെന്നോ ഏത് തവണ ക്കെന്നോ	രൂപ		റിമാർഷ്
	ഹെ.	ആർ.	സ്ക്വ.					രൂപ	പൈസ	
115/13, പുരയിടം വിസ്തീർണ്ണം: 1 ഹെ., 73 ആർ, 62 സ്ക്വ. പട്ടാഭാരതയുടെ വിവരങ്ങൾ: മാതവൽ, വർക്കി പീതാവ്, പനത്തോട്ടത്തിൽ,						AKSHAYA PADICHIRA	2017-2018			
					ഭൂമി കടം			₹348		
								₹431		
ആകെ തുക								₹779		

മേൽ വിവരിച്ച പ്രകാരം ₹779 (ഏഴുനൂറ്റി ഏഴുപത്തിയൊമ്പത് രൂപ) 2017 ഓക്ടോബർ മാസം 06 തീയതിയായ ഇന്നേ ദിവസം സ്വീകരിച്ച് വില്ലേജ് കണക്കിൽ മുതൽ വച്ചിരിക്കുന്നു.



സ്ഥലം: പാടിച്ചിറ

തീയതി: 06/10/2017

ഈ രസീത് വസ്തു വകുപ്പിന്റെ ഓൺലൈൻ സംവിധാനം മുഖേന തയ്യാറാക്കി ചുരുക്കത്തിനായി വീഡിയോ ഓഡിയോ ഓഫ് ഓഫീസ് സീറോ ആവശ്യമില്ല. രസീതിന്റെ ആധികാരികത വസ്തു വകുപ്പിന്റെ www.revenue.kerala.gov.in എന്ന പൊതുവെ പരിശോധിക്കാവുന്നതാണ്.

നമ്പർ: പി.ആർ-13/18

വില്ലേജ് ഓഫീസ്:പാടിചിറ

തീയതി: 25.01.2018

സാക്ഷ്യപത്രം

വയനാട് ജില്ലയിൽ സുൽത്താൻ ബത്തേരി താലൂക്കിൽ പാടിചിറ വില്ലേജിൽ കബനിഗിരി പി.ഒ പനംതോട്ടത്തിൽ വീട്ടിൽ വർക്കി എന്നവരുടെ മകൻ മാനുൽ പി.വി എന്നവർ നികുതി ഒടുക്കി വരുന്നതും ഇവരുടെ കൈവശത്തിലും ഉടമസ്ഥതയിലും ഉള്ളതുമായ പാടിചിറ വില്ലേജിലെ 115 /13 നമ്പറിൽ പെട്ട 0 .9246 ഹെക്ടർ ഭൂമിയിൽ കരിങ്കൽ ഖനനം നടത്തുവാൻ ഉദ്ദേശിക്കുന്നതും ടി സ്ഥലത്തിന്റെ 50 മീറ്റർ ചുറ്റളവിൽ കിണറുകൾ ,പബ്ലിക് റോഡ് ,വാസഗ്രാമങ്ങൾ എന്നവയില്ലായെന്നും ടി സ്ഥലത്തിനുവേണ്ടി എ ടി സൂയീഷ് എന്നവർ ഖനന അനുമതിക്കായി അപേക്ഷിച്ചിട്ടുള്ളതുമായ സ്ഥലം ഏതെങ്കിലും പ്രത്യേക ആവശ്യത്തിന് അസൈൻ ചെയ്തതോ ,ക്വഷിങ് വേണ്ടി പതിച്ചു നൽകിയതോ , KLU , KLR , സർക്കാർ ഭൂമി -മിച്ചഭൂമിയിൽ പെട്ടതോ , ആദിവാസികളുടെ ഭൂമിയിൽ പെട്ടതോ , റിസേർവ് വനത്തിന്റെ പരിധിയിൽ പെട്ടതോ അല്ലായെന്നും ടി സ്ഥലത്തിന്മേൽ കോടതി കേസുകൾ ,ബാങ്ക് അറ്റാച്ച്മെന്റ് എന്നിവ നിലവിലില്ല എന്നുള്ള വിവരം സാക്ഷ്യപ്പെടുത്തുന്നു .

ഈ സാക്ഷ്യപത്രം വയനാട് ജില്ലാ മീനങ്ങാടി മൈനിങ് & ജിയോളജി ഓഫീസിൽ ഹാജരാക്കുന്നതിനുവേണ്ടി മാത്രം അനുവദിച്ചിട്ടുള്ളതാണ് .



വില്ലേജ് ഓഫീസർ

16/25/1/18
VILLAGE OFFICE,
PADICHIRA



നമ്പർ: പി.ആർ. 13/18

വില്ലേജ് ഓഫീസ് : പാടിച്ചിറ

തീയതി : ൧൮.൦൧.൨൦18

ഡിമാർക്കേഷൻ സർട്ടിഫിക്കറ്റ്

വയനാട് ജില്ലയിൽ സുൽത്താൻ ബത്തേരി താലൂക്കിൽ പാടിച്ചിറ വില്ലേജിൽ കബനിഗിരി പി.ഒ, പനംതോട്ടത്തിൽ വീട്ടിൽ വർക്കി എന്നവരുടെ മകൻ മാനുവൽ പി.വി എന്നവർ നികുതി ഒടുക്കി വരുന്നതും ഇവരുടെ കൈവശത്തിലും ഉടമസ്ഥതയിലുള്ളതുമായ പാടിച്ചിറ വില്ലേജിലെ കബനി ഗിരി പോസ്റ്റ്, റീസർവ്വേ 115/13 നമ്പറിൽ പെട്ട 0.9246 ഹെക്ടർ ഭൂമിയിൽ കരിങ്കൽ ഖനനം നടത്തുവാൻ ഉദ്ദേശിക്കുന്നതും ആയതിന്റെ അതിരുകൾ കാലുകൾ നാട്ടി മഞ്ഞ പെയിന്റിച്ച് ഭൂമിയിൽ ഡിമാർക്ക് ചെയ്തതായി ഇതിനാൽ സാക്ഷ്യപ്പെടുത്തുന്നു.

ഈ സാക്ഷ്യപത്രം വയനാട് ജില്ല മീനങ്ങാടി മൈനിംഗ് & ജിയോളജി ഓഫീസിൽ ഹാജരാക്കുന്നതിനുവേണ്ടി മാത്രം അനുവദിച്ചിട്ടുള്ളതാണ്.



വില്ലേജ് ഓഫീസർ

[Signature]
18/01/18
VILLAGE OFFICER
PADICHIR





GOVERNMENT OF KERALA

DEPARTMENT OF MINING AND GEOLOGY

Directorate of Mining and Geology, Pattom Palace PO,
Kesavadasapuram, Thiruvananthapuram-695004, Kerala
www.dmg.kerala.gov.in

FORM Q



**CERTIFICATE OF RECOGNITION AS QUALIFIED PERSON TO PREPARE
MINING PLANS FOR QUARRYING MINOR MINERALS IN KERALA**

(Issued under Rule 54 of the Kerala Minor Mineral Concession Rules, 2015)

Shri. Cyriac Joseph, S/o Joseph. O.T, #2074 Sobha Dhlia, Outer ring road, Bellandur, Bangalore—560 103, Karnataka State, having given satisfactory evidence of his qualification and experience is hereby granted **RECOGNITION** under Rule 54 of the Kerala Minor Mineral Concession Rules, 2015 as qualified person to prepare Mining Plans for quarrying minor minerals in Kerala.

The registration number is **DMG/KERALA/RQP/15/2018**

This recognition is valid for a period of 10 years ending 22/02/2028


Photograph of RQP

Signature of RQP



C. K. BAIJU
DIRECTOR OF MINING AND GEOLOGY [I/C]

C.K. BAIJU
M.Sc, MPhil, Dip.Crl, MMGI
Director of Mining & Geology (i/c)
Kesavadasapuram, Pattom Palace PO
Thiruvananthapuram-695 004

Place: Thiruvananthapuram
Date: 23-02-2018



LPB

No.DOW/M- 462/2018

District Office,
Mining & Geology Department,
Meenangadi, Wayanad,
Email: geo.way.dmg@kerala.gov.in,
Phone No. 04936 249124
Dated: 21.05.2018

From

The Geologist,

To

Sri. Sudheesh. A.T,
Adakkathottathil House,
Kumbleri Post
Wayanad-673591

Sir,

Sub: Mines and Minerals- Minor Mineral-Granite Building Stone- Application for Quarrying Permit under KMMC Rule 2015-Documents to be produced-Letter of indent forwarding of- reg.

Ref : (1) Your application dtd: 09.02.2018

(2) Kerala Minor Mineral Concession Rules 2015

Please refer to the above. As per the reference 1st cited, you have applied for obtaining a quarrying permit from this office for the extraction of **Granite Building Stone** from an area of **0.9246 Hectare** in **Re.Survey Nos. 115/13 of Padichira village of Sulthan Bathery Taluk in Wayanad District** (Geo co-ordinates Lat. N 11° 51' 40.59" Long. E 76° 10' 24.22" to N 11° 51' 38.08" Long. E 76° 10' 24.43") and as shown in the Survey Map submitted along with the application. As per the documents attached with your application this office inspected the area applied for Quarrying Permit and its surroundings on 13.04.2018. On inspection, this office was realized that to the area applied for a Quarrying Permit can be granted under the provisions contained in the KMMC Rules, 2015 subject to the production of under mentioned valid documents. It is further informed that a quarrying permit would be granted under the said rules to you to the said area if you produce the said valid documents to the satisfaction of this office in accordance with the relevant statutes.

DOCUMENTS TO BE PRODUCED

1. Mining Plan and Environmental clearance as stipulated in the KMMC rules 2015, to the area applied for.
2. Consent from the State Pollution Control Board.
3. Explosive Licence from the authorities concerned.
4. D & O Licence from the Secretary, LSGD concerned.

It is also informed that as per the provisions contained in the KMMC Rules 2015 this Letter of indent shall be sufficient for the purpose of issuing necessary licences/consents/NOC etc. by the other statutory authorities concerned. All the Survey Numbers included in the Survey Map submitted in this connection shall be included in all the aforesaid documents.

It is further informed that this Letter of indent is valid upto the date of grant of quarrying permit for the purpose of obtaining other statutory licences concerned.

Yours faithfully,



[Signature]
21/5/18
GEOLOGIST
DISTRICT OFFICE
DEPT. OF MINING & GEOLOGY
MEENANGADI, WAYANAD - 673 591

ഭാരത സർക്കാർ
GOVERNMENT OF INDIA



സുധീഷ് എ ടി
Sudheesh A T


ജനന വർഷം Year of Birth: 1985
ലിംഗം Gender: Male

8336 8410 4163



ജ്യോതി - സാധാരണക്കാരന്റെ അവകാശം

ഭാരത സർക്കാർ
GOVERNMENT OF INDIA



Address: S/O. Thankachan A
N, Adakkathottathil,
Rattakkundu, Meenangadi
Ambalavayal, Kumbalangi
Wayanad, Kerala. 673591

1800 180 1947

help@uidai.gov.in

www.uidai.gov.in

P.O. Box No. 1947
Bangalore-560 001





കേരളം കേരള KERALA

BR 065197

സമ്മതപത്രം

2018-ാം ആണ്ട് ജനുവരി മാസം 16-ാം തീയതി വയനാട് ജില്ലയിൽ, സുൽത്താൻ ബത്തേരി താലൂക്കിൽ, പാടിച്ചിറ വില്ലേജിൽ, കബനിഗിരി പി.ഒ, പനംതോട്ടത്തിൽ വർക്കി എന്നവരുടെ മകൻ മാനുവൽ. പി.വി, ആയ ഞാൻ സുൽത്താൻ ബത്തേരി താലൂക്കിൽ, അമ്പലവയൽ വില്ലേജിൽ, കുമ്പളേരി പി.ഒ, അടക്കാത്തോട്ടത്തിൽ വീട്ടിൽ തങ്കച്ചൻ മകൻ, സുധീഷ്. എ.ടി എന്നവർക്ക് എഴുതിക്കൊടുക്കുന്ന സമ്മതപത്രം.

.....2

P.V മാനുവൽ *[Signature]*



20324 Value ₹. 100/-

12.1.18

മുത്തമൻ P.V. ചന്ദ്രൻ

[Signature]
SATHYAN S. S. SATHYAN S. S.



കേരളം കേരल KERALA

BR 065198

-2-

വയനാട് ജില്ലയിൽ, സുൽത്താൻ ബത്തേരി താലൂക്കിൽ, പാടിച്ചിറ വില്ലേജിലെ, പി.ഒ. കബനിഗിരിയിലെ എന്റെ ഉടമസ്ഥതയിലും, കൈവശാവകാശത്തിലിരിക്കുന്നതും റീ. സർവ്വെ 115/13 ൽ പെട്ടതുമായ 0.9246 ഹെക്ടർ സ്ഥലത്തുനിന്നും കരിങ്കൽ ഖനനം ചെയ്യുന്നതിനും, വിൽപ്പന നടത്തുന്നതിനും മൈനിംഗ് & ജിയോളജി വകുപ്പിൽ നിന്നും ഖനനാനുമതി അനുവദിക്കുന്ന തീയതിമുതൽ 12 വർഷം വരെയു ജള കാലയളവിലേക്ക് താഴെ പേരെഴുതി ഒപ്പുവെച്ചിരിക്കുന്ന സാക്ഷികൾ മുമ്പാകെ ഞാൻ പൂർണ്ണമായി സമ്മതിച്ചിരിക്കുന്നു.



എന്ന്

P.V. മാനവൽ

മാനവൽ, പി.വി

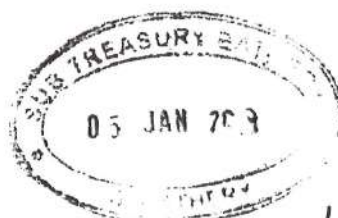
സാക്ഷികൾ:-

പേര് :- 1. മിമിൻ. ബി. *[Signature]*
2. ജോൺ. ജോൺ (1)
വിലാസം:- *[Signature]*
673592

2. സുനിൽകുമാർ
മെമ്മോട്ടാല (1)
നാഷണൽ (1)
സുനിൽകുമാർ മെമ്മോട്ടാല

20325 Value ₹. (100)
12.1.18

മാനവൽ P.V. ചിത്രീകരിച്ചിരിക്കുന്നു
16



47.



കേരളം കേരള KERALA

BR 695516

AFFIDAVIT

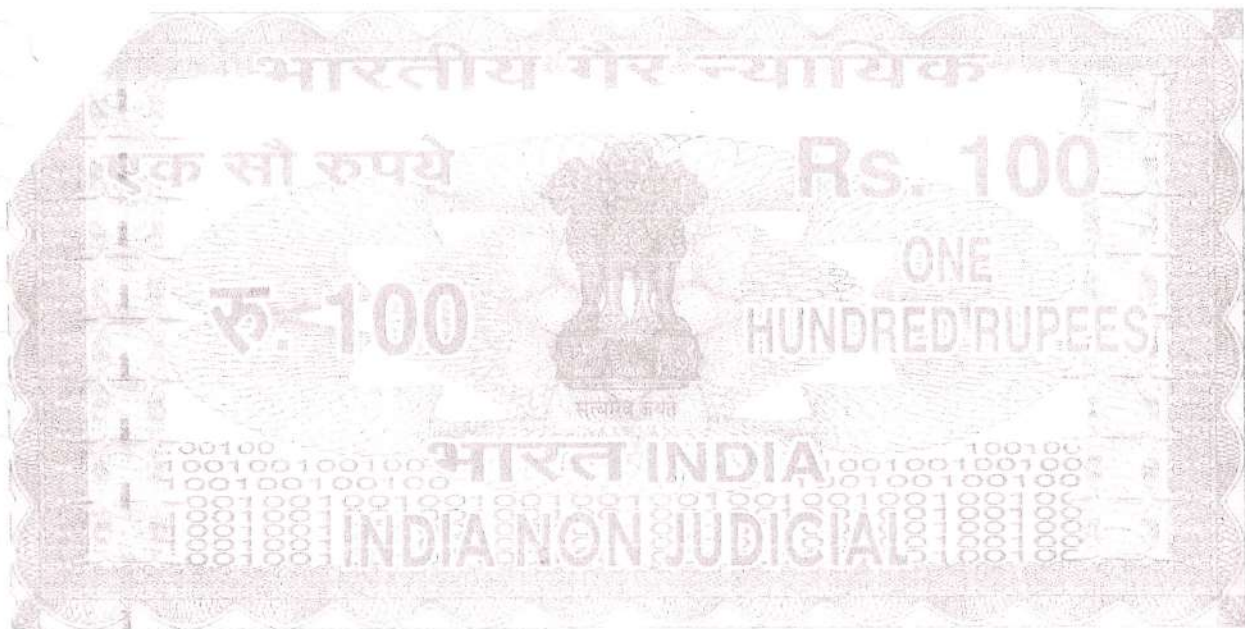
I Sudheesh A T son of Thankachan aged 33 years residing at Adakkathottathil, Rattakundu, Kumbleri (PO) Meenangadi do hereby solemnly affirms and states as follows:-

I hereby swear that retention wall/barricade/fencing/compound wall will be provided , surrounding the quarry in an area of 92.46 Ares in Re survey No.115/13 of padichira village of Sulthan Bathery Taluk of Wayanad District before the commencement of the quarrying operation for preventing accidents by falling of human beings animals and materials into the quarry.

Sudheesh A.T.



28.07.2018
1.2.18
10.12.18
A.T. Ramesh Nair
A. MUSSAIN, Station Master



കേരളം KERALA

BR 695515

We also swear that all effective preventive measures will be taken by me for the safety of laborers as well as the general public.

Padichira
08-02-2018

Shalish A.T.
Deponent

Witness

1. Anil Kumar
Pulhannur (A)
Puthupattur (PO) Mankulam
[Signature]
2. Sunil Kumar
Mykkottumkara
Nankaly (PO)
Sulliam Mankulam
[Signature]

28600 Value ₹: 100/-
01.2.18
Issued to: *M. S. A.T. P...*
M.P. HUSSAIN, Stamp Vendor
Bathery



49

**GLOBAL ENVIRONMENT****ANNEXURE - 9**

(Consulting Engineers, Mine designers, Geologist & Surveyors)

3rd Main Road, Basaveswara Badavane,
HOSPET – 583201, Dist., Bellary (Karnataka)

Ph : +918394 229433, 651111

e-mail : gems_hpt@yahoo.com

Website : www.globalmining.in

Date: 2.1.2018

TEST REPORT OF AMBIENT AIR QUALITY DATA

- 1 Name of the Customer/Address : Granite Building Stone Quarry of
Sri. Sudheesh A.T'
Extent: 0.9246 Ha. (2.2846 Acres)
Sy.No. 374/1Pt
Padichira Village
Sultan Bathery Taluk
Wayanad District
Kerala State.
- 2 Customer Reference : By hand
(Post/ Courier/e-Mail/By Hand)
- 3 Name of the Station : Core zone area (A1)
- 4 Sample Description : Ambient Air Quality monitoring
- 5 Sample Collected By : GLOBAL Environment & Mining Services
- 6 Particulars of Sample Collected : Combined Sampler GTI-241
- 7 Date of Sample Collection : 26.12.2017
- 8 Date of Sample Receipt : 27.12.2017
- 9 Date of Analysis : 28.12.2017
- 10 Date of Analysis Completion : 30.12.2017
- 11 Report Number : GEMS/BNG/SAT/AAQ/0187/2017-2018

Duration of Monitoring	PM10 [µg/m³]		PM2.5 [µg/m³]		SO ₂ [µg/m³]		NO _x [µg/m³]	
	IS : 5182: (Part 23) 2006		USEPA 2001		IS : 5182: (Part 2) 2001 (RF 2012)		IS : 5182: (Part 6) 2006 (RF 2012)	
	Result	STD	Result	STD	Result	STD	Result	STD
8 Hrs	40.85	100	14.66	60	8.46	80	6.04	80

INFERENCE	As per CPCB Standards, Report Status: - Measured Values for the above parameters are within the limit.
-----------	---

Ravikumar
Analysed By
Ravikumar.J
Chemist

**Note:**

- The result listed refers only to the tested samples & applicable parameters. Endorsement of products is neither inferred nor implied.
- Water Samples will be destroyed after 15 days, Minerals 3 Months, Filter papers & Thinblies 7 Days and ILC samples from the date of issue of Month test certificate unless otherwise specified.
- This report is not to be reproduced wholly or in part & cannot be used as evidence in the Court of law & should not use any advertising media without special permission in writing.
- Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Hosapete jurisdiction only.

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GLOBAL ENVIRONMENT & MINING SERVICES
(Consulting Engineers, Mine designers, Geologist & Surveyors)

3rd Main Road, Basaveswara Badavane,
HOSPET – 583201, Dist., Bellary (Karnataka)

Ph : +918394 229433, 651111

e-mail : gems_hpt@yahoo.com

Website : www.globalmining.in

Date: 2.01.2018

TEST REPORT OF AMBIENT AIR QUALITY DATA

- 1 Name of the Customer/Address : Granite Building Stone Quarry of
Sri. Sudheesh A.T'
Extent: 0.9246 Ha. (2.2846 Acres)
Sy.No. 374/1Pt
Padichira Village
Sultan Bathery Taluk
Wayanad District
Kerala State.
- 2 Customer Reference : By hand
(Post/ Courier/e-Mail/By Hand)
- 3 Name of the Station : Marakkadavu Village (A2)
- 4 Sample Description : Ambient Air Quality monitoring
- 5 Sample Collected By : GLOBAL Environment & Mining Services
- 6 Particulars of Sample Collected : Combined Sampler GTI-241
- 7 Date of Sample Collection : 26.12.2017
- 8 Date of Sample Receipt : 27.12.2017
- 9 Date of Analysis : 28.12.2017
- 10 Date of Analysis Completion : 30.12.2017
- 11 Report Number : GEMS/BNG/SAT/AAQ/0188/2017-2018

Duration of Monitoring	PM10 [µg/m³]		PM2.5 [µg/m³]		SO ₂ [µg/m³]		NO _x [µg/m³]	
	IS : 5182: (Part 23) 2006		USEPA 2001		IS : 5182: (Part 2) 2001 (RF 2012)		IS : 5182: (Part 6) 2006 (RF 2012)	
	Result	STD	Result	STD	Result	STD	Result	STD
24 Hrs	35.76	100	8.54	60	8.16	80	7.88	80

INFERENCE	As per CPCB Standards, Report Status: - Measured Values for the above parameters are within the limit.
------------------	---

Ravi
Analysed By
Ravikumar.J
Chemist



Note:

1. The result listed refers only to the tested samples & applicable parameters. Endorsement of products is neither inferred nor implied.
2. Water Samples will be destroyed after 15 days, Minerals 1 Month, Filter papers & Thimbles 7 Days and ILC samples from the date of issue of Month test certificate unless otherwise specified.
3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the Court of law & should not use any advertising media without special permission in writing.
4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Hosapete jurisdiction only.

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(Consulting Engineers, Mine designers, Geologist & Surveyors)

3rd Main Road, Basaveswara Badavane

HOSPET – 583201, Dist., Bellary (Karnataka)

Ph : +91 8394 229433, 651111

e-mail : gems_hpt@yahoo.com

Website : www.globalmining.in

Date: 2.1.2018

TEST REPORT OF AMBIENT NOISE LEVEL MONITORING

- 1 Name of the Customer/Address : Granite Building Stone Quarry of Sri. Sudheesh A.T
Extent: 0.9246 Ha. (2.2846 Acres)
Sy.No. 374/1Pt
Padichira Village
Sultan Bathery Taluk
Wayanad District
Kerala State,
- 2 Customer Reference : By hand
- 3 Sample Description : Ambient Noise Level Monitoring dB(A)
- 4 Sample Collected By : GLOBAL Environment & Mining Services
- 5 Particulars of Sample Collected : EQUINOX-EQ 107
- 6 Date of Sample Collection : 26.12.2017 TO 28.12.2017
- 7 Date of Sample Receipt : 30.12.2017
- 8 Method Adopted : IS 9989 -1981 Reaffirmed 2008
- 9 Date of Download Data : 10.08.2017
- 10 Report Number : GEMS/BNG/SAT/ANLM/089/2017-2018

Date	26.12.2017	28.12.2017
Time (hrs)	Core Zone N1	Marakkaduvu Village N2
6.00	42	43
7.00	43	44
8.00	44	45
9.00	45	46
10.00	46	48
11.00	47	49
12.00	48	50
13.00	49	51
14.00	50	52
15.00	52	53
16.00	54	53
17.00	53	52
18.00	49	50
19.00	48	49
20.00	47	48
21.00	46	46
22.00	45	44
23.00	44	43
00.00	43	41
01.00	42	40
02.00	41	39
03.00	40	38
04.00	38	36
05.00	37	35
Min	54	53
Max	37	35



Ravikumar J
Analysed By
Ravikumar.J
Chemist

Authorised Signatory
K.Ramakrishna Reddy
Technical Manager





GLOBAL ENVIRONMENT & MINING SERVICES

(Consulting Engineers, Mine designers, Geologist & Surveyors)

3rd Main Road, Basaveswara Badavane,
HOSPET – 583201, Dist., Bellary (Karnataka)

Ph : +918394 229433, 651111

e-mail : gems_hpt@yahoo.com

Website : www.globalmining.in

Date: 02.01.2017

TEST REPORT OF WATER QUALITY DATA

- 1 Name of the Customer/Address : Granite Building Stone Quarry of
Sri. Sudheesh A.T
Extent: 0.9246 Ha. (2.2846 Acres)
Sy.No. 374/1Pt
Padichira Village
Sultan Bathery Taluk
Wayanad District
Kerala State.
- 2 Customer Reference : By hand
(Post/ Courier/e-Mail/By Hand)
- 3 Sample Description : Drinking Water
- 4 Sample Collected By : GLOBAL Environment & Mining Services
- 5 Date of Sample Collection : 26.12.2017
- 6 Date of Sample Receipt : 27.12.2017
- 7 Date of Analysis : 28.12.2017
- 8 Date of Analysis Completion : 30.12.2017
- 9 Report Number : GEMS/BNG/VRP/DW/ 190/2017-2018

S.No	Parameters	Result	Unit	APHA 22 nd Edition Method	IS 10500 - 2012	
		DW-01			Acceptable	Permissible
1	Colour	<5	Hazen	APHA 2120 B	5	15
2	odour	Ag	-	APHA 2150 B	Agreeable	Agreeable
3	pH at 25 Deg Celcius	7.242	-	APHA 4500 B	6.5 - 8.5	No Relaxation
4	Taste	Ag	-	IS 3025 Part 8	Agreeable	Agreeable
5	Turbidity	0.06	NTU	APHA 2130 B	1.0	5.0
Chemical Parameters						
6	Total dissolved solids	50.4	mg/l	APHA 2540 B	500	2000
7	Calcium as Ca	3.2	mg/l	APHA 3500 B	75	200
8	Magnesium as Mg	2.91	mg/l	APHA 3500 B	30	100
9	Chloride as Cl	13.0	mg/l	APHA 4500 B	250	1000
10	Fluoride as F	0.09	mg/l	APHA 4500 D	1.0	1.5
11	Conductivity	84	µs/cm	APHA 2510B	-	-
12	Nitrate as NO ₃	8.2	mg/l	APHA 4500 E	45	No Relaxation
13	Sulphate as SO ₄	2.42	mg/l	APHA 4500 E	200	400
14	Total Alkalinity as CaCO ₃	16.0	mg/l	APHA 2320 B	200	600
15	Total Hardness as CaCO ₃	20	mg/l	APHA 2340 B	200	600
16	Iron as Fe	Nil	mg/l	APHA 3500 B	0.3	1.0
17	Boron as B	Nil	mg/l	APHA 4500 B	0.5	1.0

Note: DW-01: Marakkadavu Village,

INFERENCE	As per IS 10500 - 2012 Standards, Report Status: - Measured Values for the above parameters are within the limit.
-----------	--

Analysed By
Ravikumar.J
Chemist



Authorised Signatory
K.Ramakrishna Reddy
Technical Manager



Note:

1. The result listed refers only to the tested samples & applicable parameters. Endorsement of products is neither inferred nor implied.
2. Water Samples will be destroyed after 15Days. Other samples 3 Months after report. 7 Days and ILC samples from the date of issue of Month test certificate unless otherwise specified.
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PLATES



Village : Padubira
Taluk : Southern Bhatery
District : Weynad
State : Kerala

SURVEY MAP

MINING RESERVE AREA : 0.6466 Ha
BUTTER ZONE AREA (7.5a) : 0.2780 Ha
TOTAL MINING RESERVE APPLICATION AREA : 0.9246 Ha

All dimensions are in meters
S/N: 115/13

INDEX

- ☒ Village Road
☒ Private Road/Traffic
☒ Known point (Landmark)
☒ House
☐ Old Pt - 0.043 Ha

Land Index of Mining Reserve Area

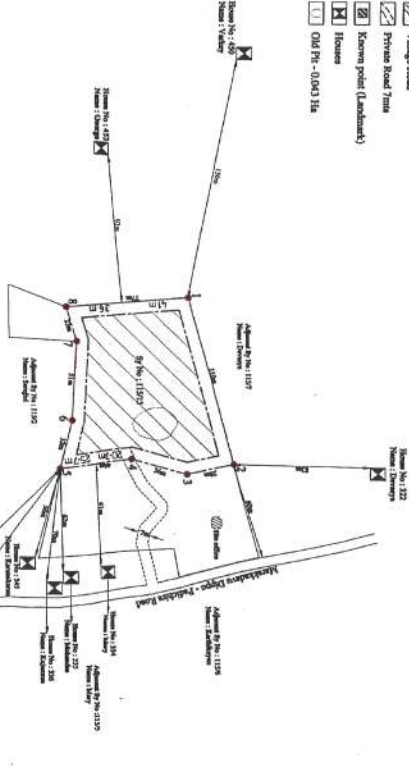
S/N	Doc No.	Sy No.	Village Name	Name of the owner	Area of possession including buffer zone in Ha.	Area for Applied in Ha.	Total
1	209013	115/13	Padubira	Mansoor P V	1.7962	0.6466	0.2780
							0.9246

GPS READINGS OF BOUNDARY POINTS

Boundary Point	Latitude	Longitude
1	N-11°51'06.200"	E-76°10'24.250"
2	N-11°51'04.430"	E-76°10'23.140"
3	N-11°51'02.640"	E-76°10'22.290"
4	N-11°51'00.440"	E-76°10'21.440"
5	N-11°51'00.000"	E-76°10'21.440"
6	N-11°51'00.000"	E-76°10'21.440"
7	N-11°51'00.000"	E-76°10'21.440"
8	N-11°51'00.000"	E-76°10'21.440"

GPS READINGS OF BOUNDARY POINTS

Boundary Point	Name	Latitude	Longitude
1	Known Point 1	N-11°51'06.200"	E-76°10'24.250"
2	Known Point 2	N-11°51'04.430"	E-76°10'23.140"
3	Known Point 3	N-11°51'02.640"	E-76°10'22.290"
4	Known Point 4	N-11°51'00.440"	E-76°10'21.440"
5	Known Point 5	N-11°51'00.000"	E-76°10'21.440"
6	Known Point 6	N-11°51'00.000"	E-76°10'21.440"
7	Known Point 7	N-11°51'00.000"	E-76°10'21.440"
8	Known Point 8	N-11°51'00.000"	E-76°10'21.440"



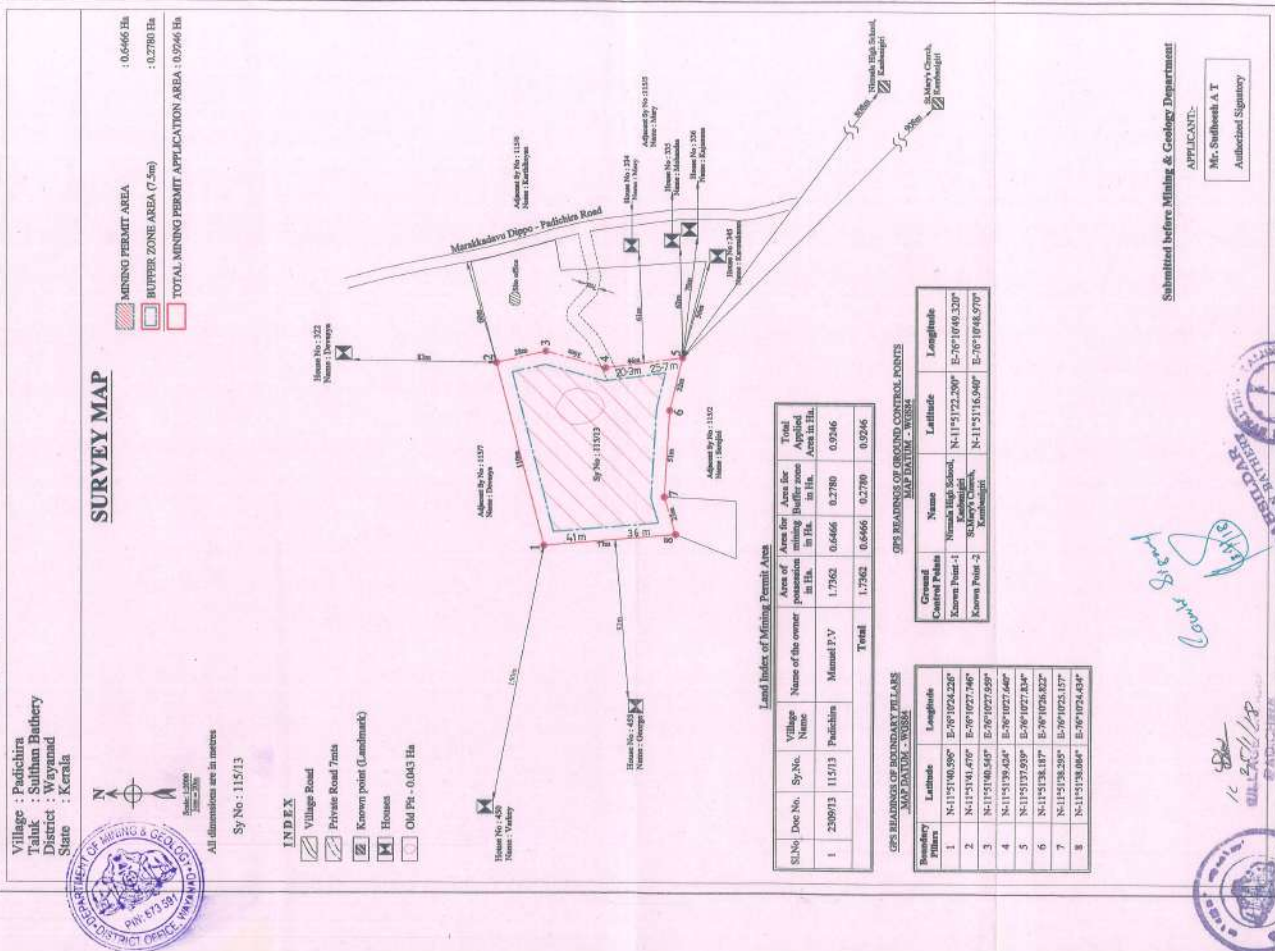
11/05/2019

11/05/2019



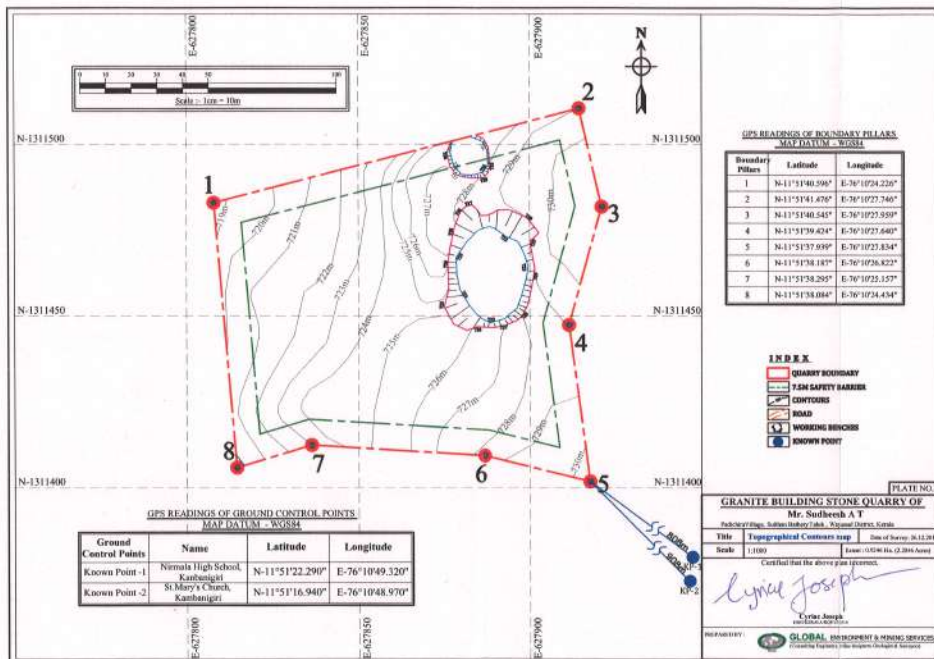
Submitted before Mining & Geology Department
APPROVED:
M. Subash A T
Authorized Signatory

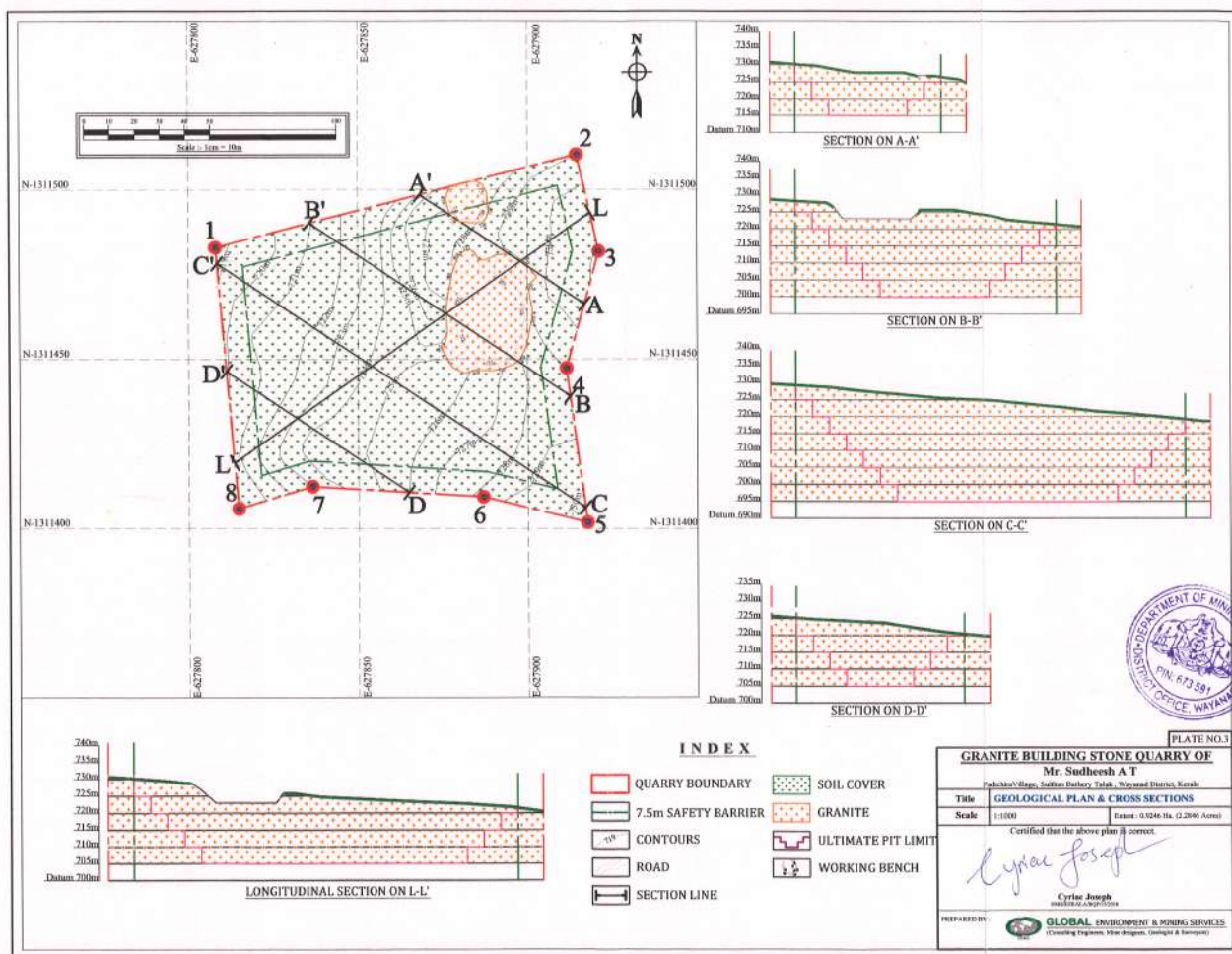
CR 13/18

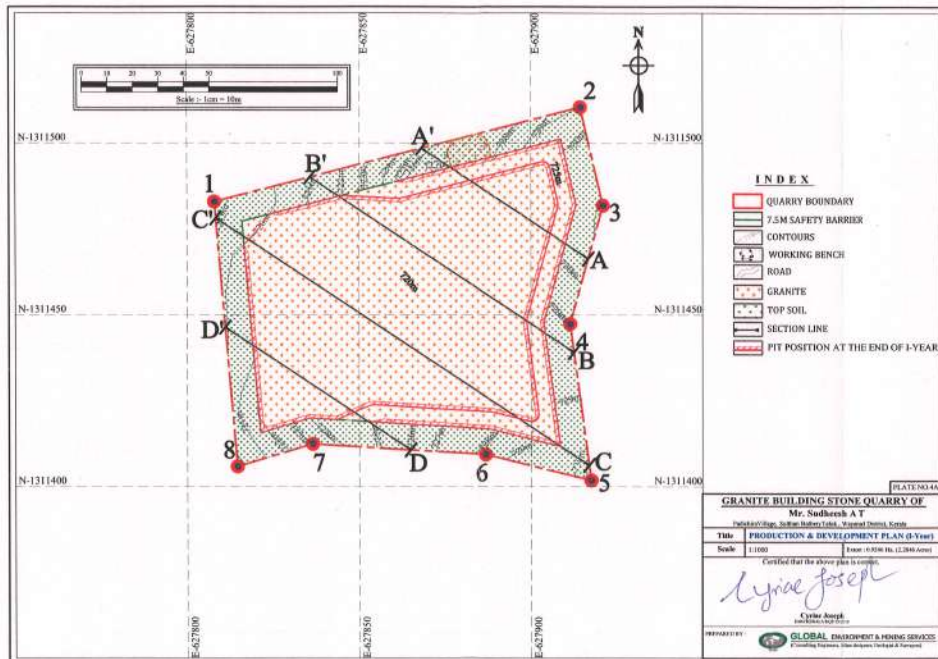


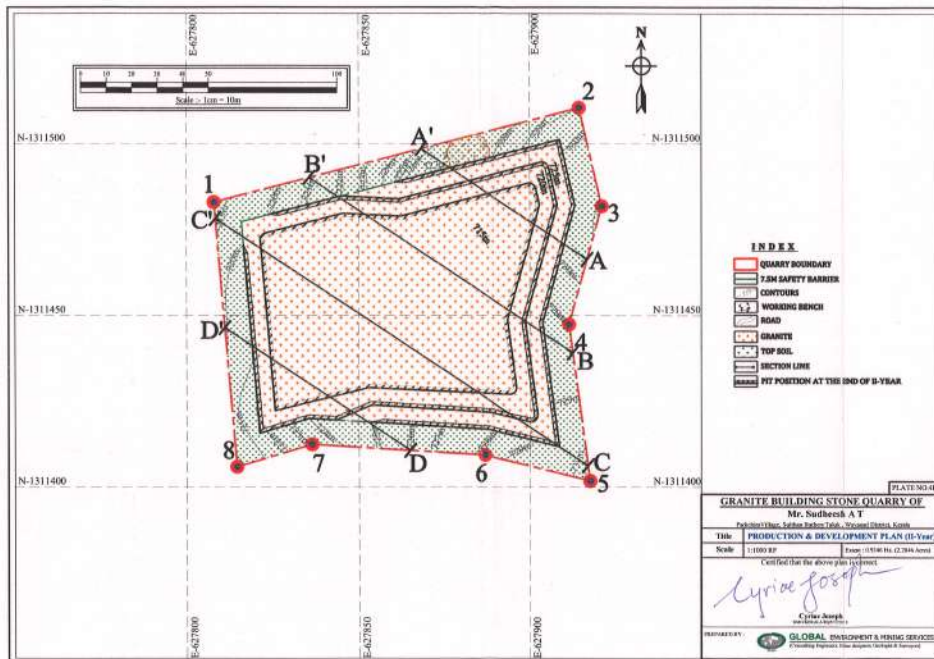
Handwritten signature of Mr. Sudhesh A T

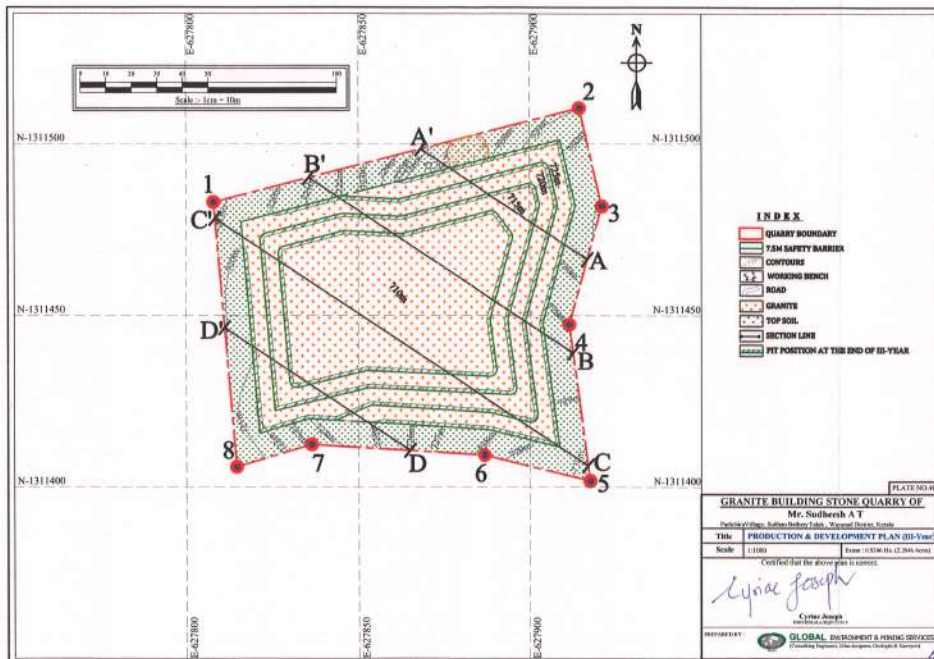


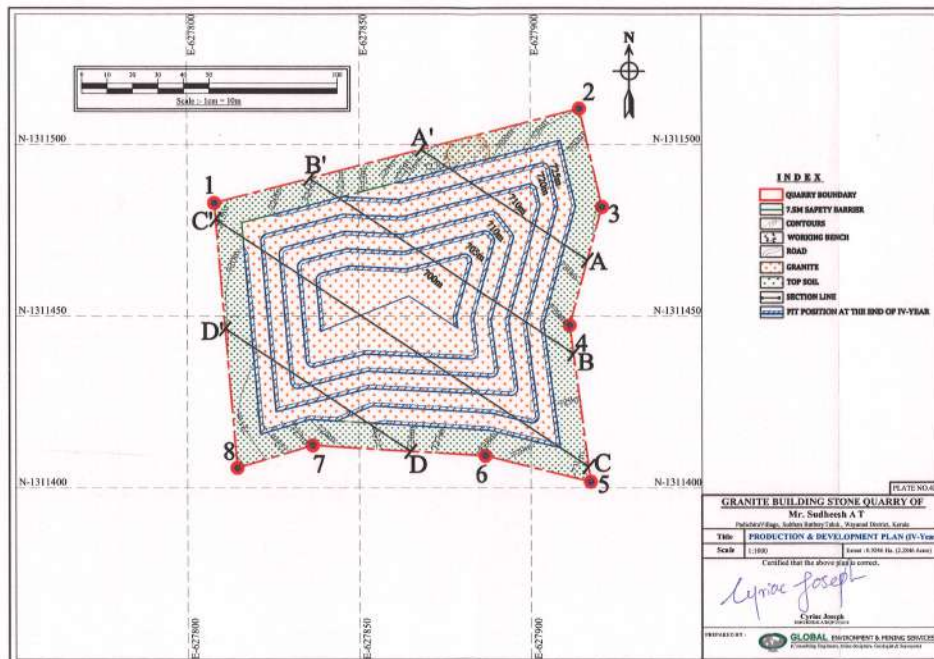


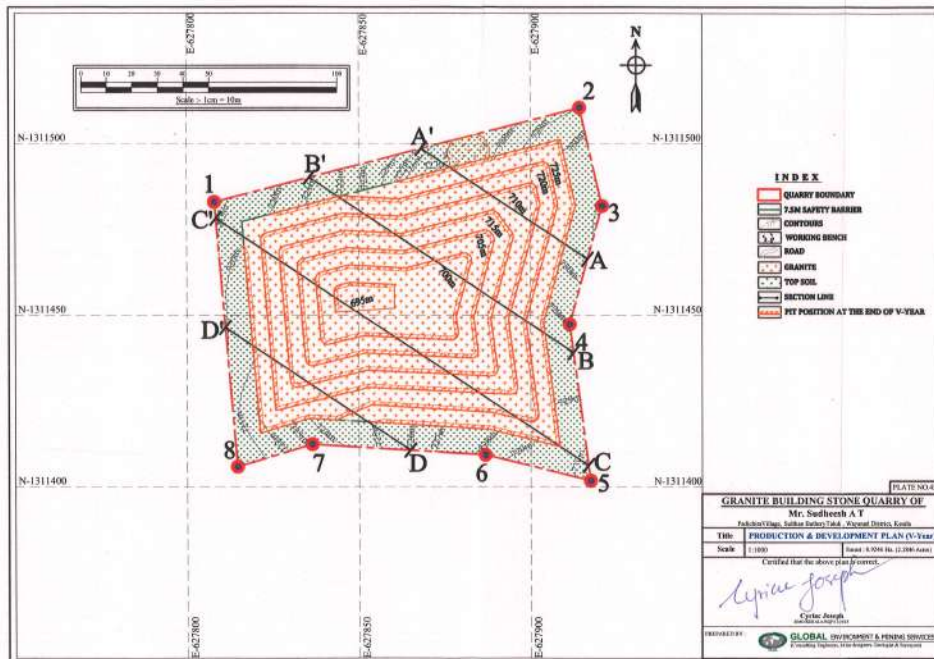


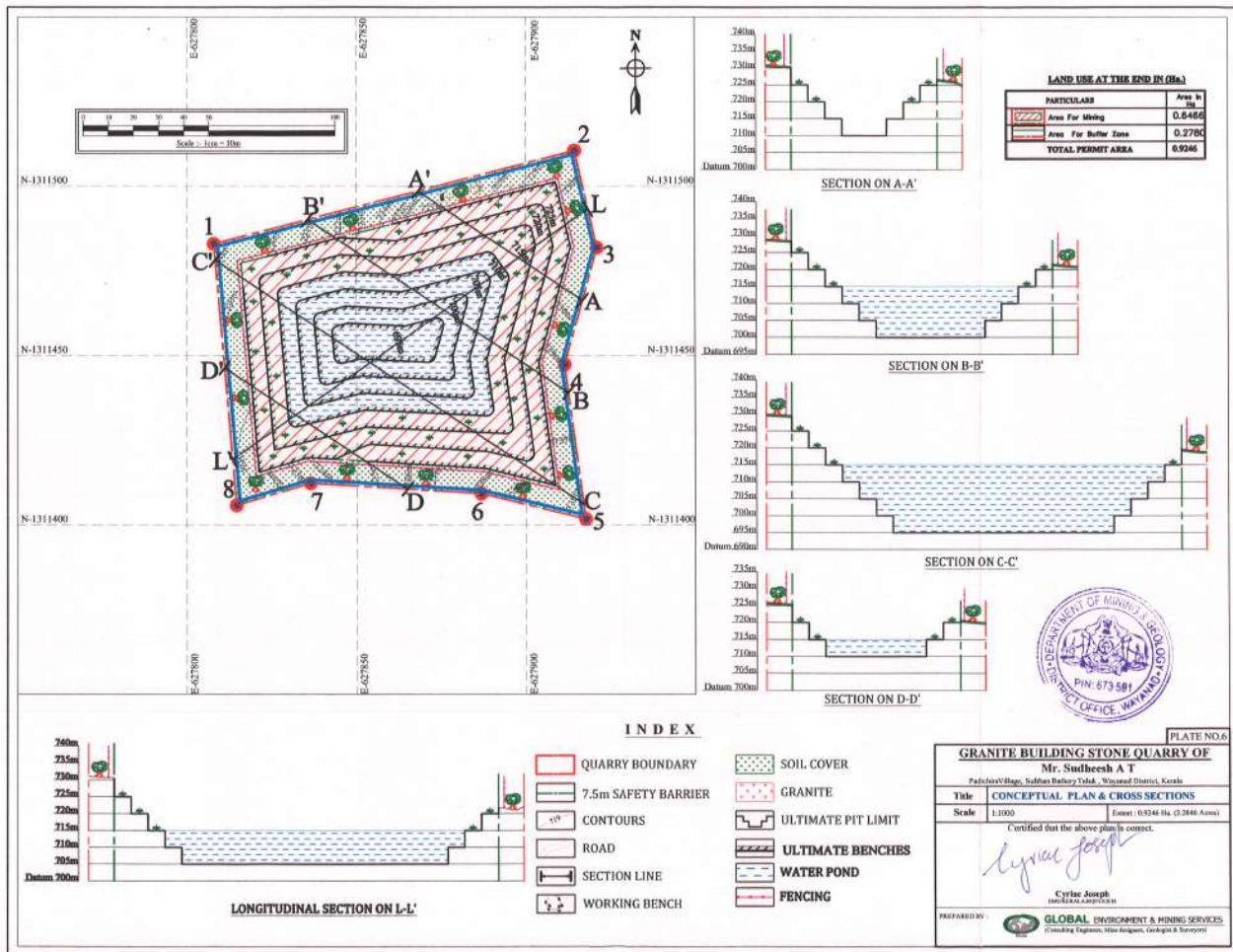


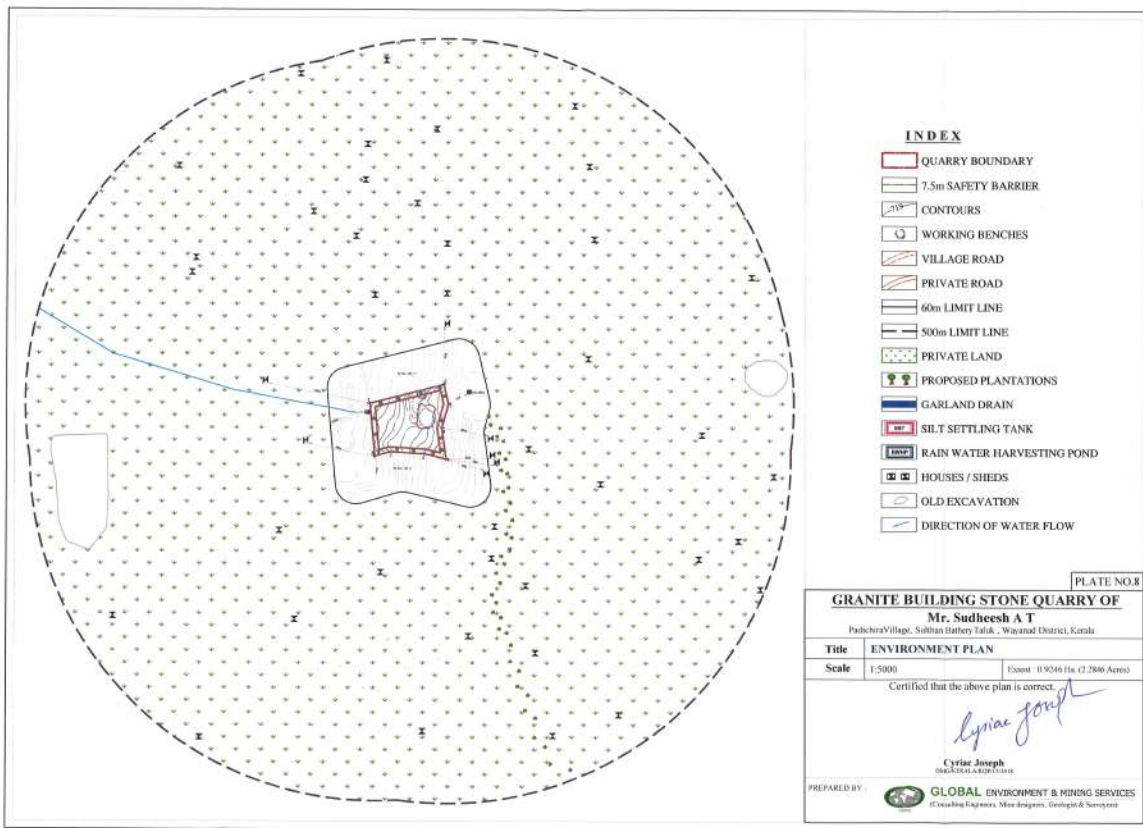




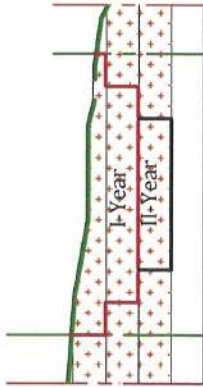






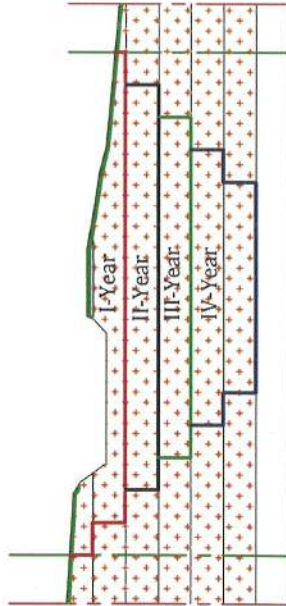


740m
735m
730m
725m
720m
715m
Datum 710m



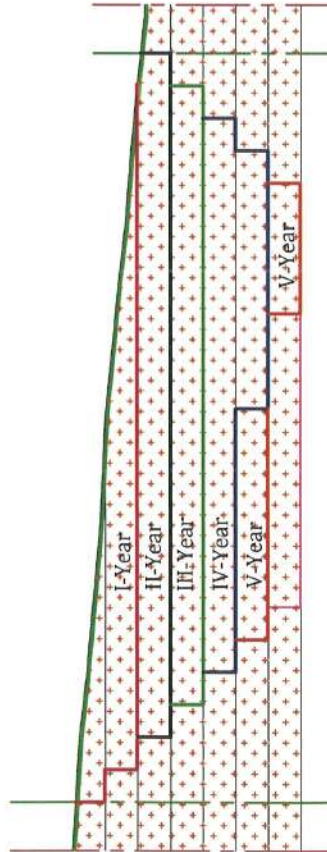
SECTION ON A-A'

740m
735m
730m
725m
720m
715m
710m
705m
700m
Datum 695m



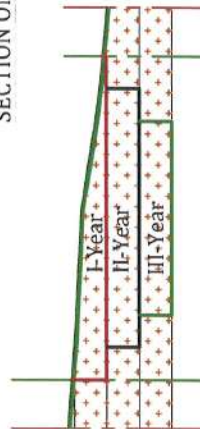
SECTION ON B-B'

740m
735m
730m
725m
720m
715m
710m
705m
700m
695m
Datum 690m



SECTION ON C-C'

735m
730m
725m
720m
715m
710m
Datum 700m



SECTION ON D-D'

INDEX

- QUARRY BOUNDARY
- 7.5m SAFETY BARRIER
- SOIL COVER
- GRANITE
- ULTIMATE PIT LIMIT
- PIT POSITION AT THE END OF I-YEAR
- PIT POSITION AT THE END OF II-YEAR
- PIT POSITION AT THE END OF III-YEAR
- PIT POSITION AT THE END OF IV-YEAR
- PIT POSITION AT THE END OF V-YEAR

PLATE NO.5

GRANITE BUILDING STONE QUARRY OF

Mr. Sudheesh A T

Padichira Village, Sulthan Bathery Taluk, Wayanad District, Kerala

Title PRODUCTION & DEVELOPMENT SECTIONS

Scale 1:1000

Extent : 0.9246 Ha (2.2846 Acres)

Certified that the above plan is correct.

Cyril Joseph

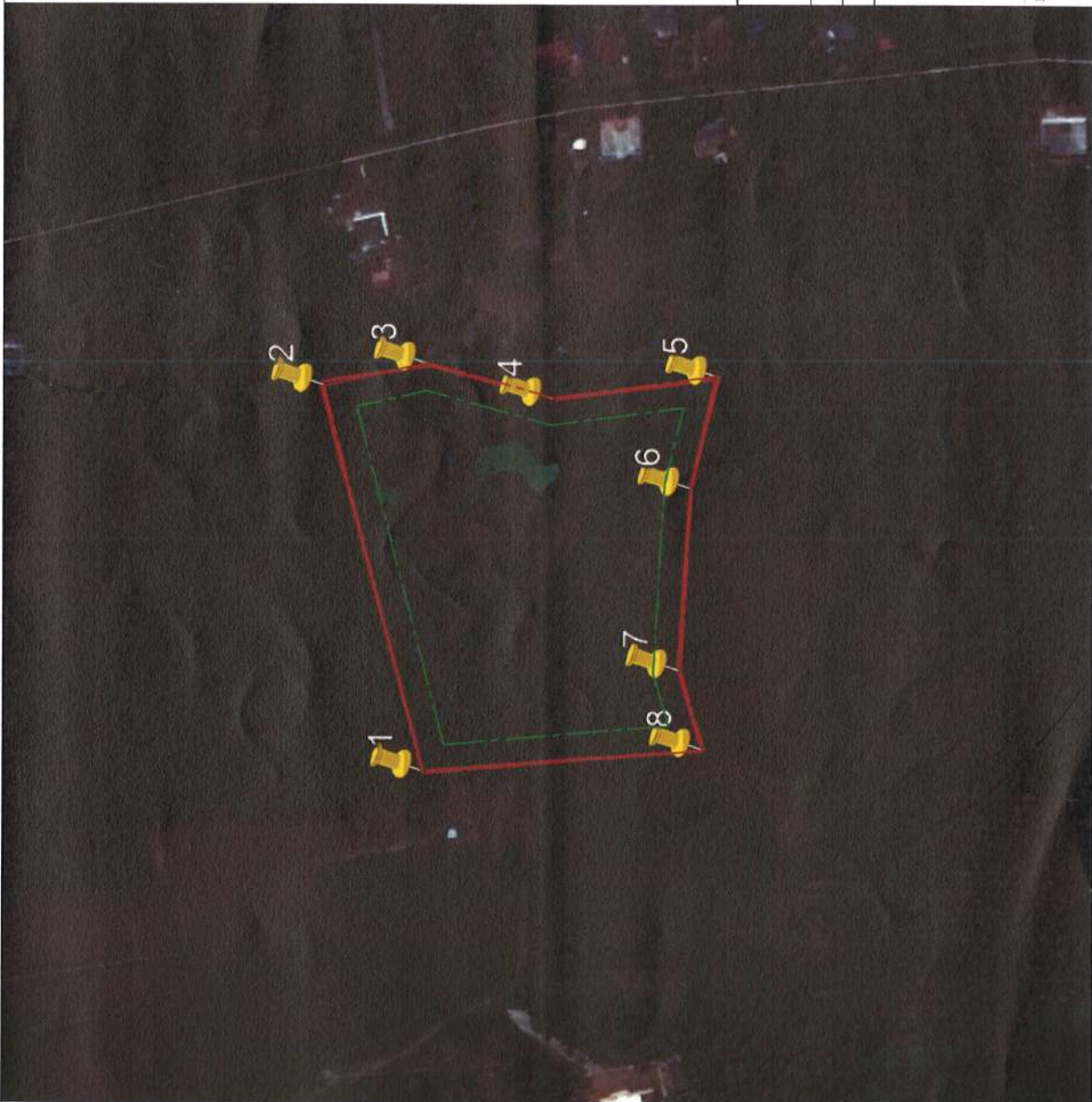
Cyril Joseph
DMAC/PA/14/0007/2008

PREPARED BY :



GLOBAL ENVIRONMENT & MINING SERVICES
(Consulting Engineers, Mine designers, Geologists & Surveyors)





GPS READINGS OF BOUNDARY PILLARS
MAP DATUM - WGS84

Boundary Pillars	Latitude	Longitude
1	N-11°51'40.596"	E-76°10'24.226"
2	N-11°51'41.476"	E-76°10'27.746"
3	N-11°51'40.545"	E-76°10'27.959"
4	N-11°51'39.424"	E-76°10'27.640"
5	N-11°51'37.939"	E-76°10'27.834"
6	N-11°51'38.187"	E-76°10'26.822"
7	N-11°51'38.295"	E-76°10'25.157"
8	N-11°51'38.084"	E-76°10'24.456"



I N D E X

- QUARRY BOUNDARY
- 7.5m SAFETY BARRIER

PLATE NO.7

GRANITE BUILDING STONE QUARRY OF

Mr. Sudheesh A T

Padichira Village, Sulthan Bathery Taluk, Wyanad District, Kerala

SATELLITE IMAGE SHOWING PERMIT AREA

Title	Scale
NTS	Extent : 0.9246 Ha. (2.2846 Acres)

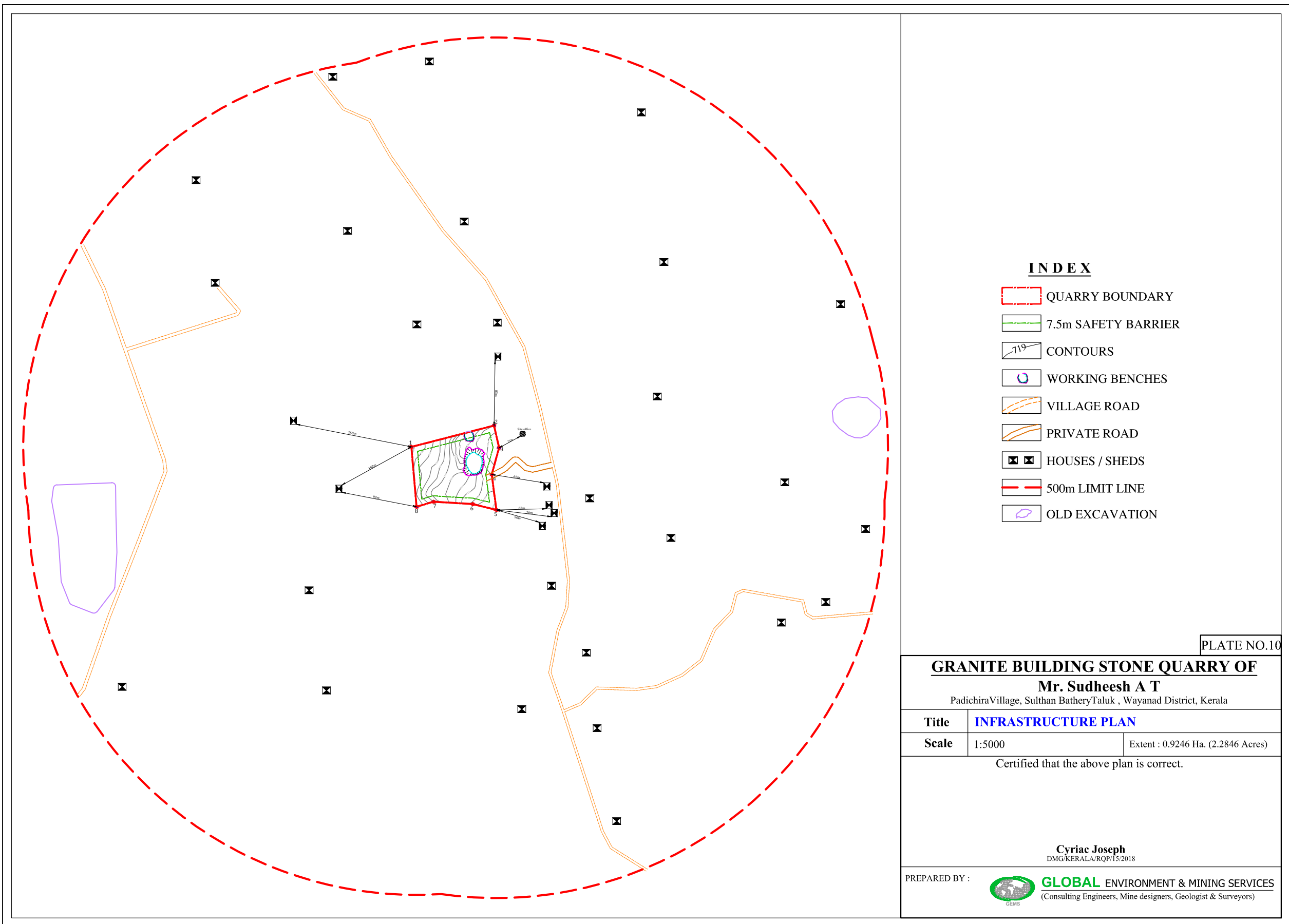
Certified that the above plan is correct.

Cyrine Joseph

Cyrine Joseph
DMD (G.B.A.), P.O. No. 152/18

PREPARED BY: **GLOBAL ENVIRONMENT & MINING SERVICES**
(Consulting Engineers, Mine designers, Geologists & Surveyors)





INDEX

- QUARRY BOUNDARY
- 7.5m SAFETY BARRIER
- CONTOURS
- WORKING BENCHES
- VILLAGE ROAD
- PRIVATE ROAD
- HOUSES / SHEDS
- 500m LIMIT LINE
- OLD EXCAVATION

PLATE NO.10

GRANITE BUILDING STONE QUARRY OF

Mr. Sudheesh A T

Padichira Village, Sulthan Bathery Taluk , Wayanad District, Kerala

Title **INFRASTRUCTURE PLAN**

Scale 1:5000 Extent : 0.9246 Ha. (2.2846 Acres)

Certified that the above plan is correct.

Cyriac Joseph
DMG/KERALA/RQP/15/2018

PREPARED BY :



GLOBAL ENVIRONMENT & MINING SERVICES
(Consulting Engineers, Mine designers, Geologist & Surveyors)

