

**BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL,
SOUTHERN ZONE, CHENNAI**

Appeal No. 34 of 2023 (SZ)

M/s. Sri Sai Infrastructures,
Rep. by its Partner Mr.D.Kumar,
No.18, G4, Buckmar Flats,
15th Cross Street, New Colony,
Chrompet, Chennai - 600 044.

... APPELLANT

Versus

1. State Level Environment Impact Assessment Authority (SEIAA),
Rep. by its Member Secretary,
3rd Floor, Panagal Maaligai,
No.1, Jeenis Road, Saidapet, Chennai - 600 015.
2. State Level Expert Appraisal Committee (SEAC),
Rep. by its Chairman,
3rd Floor, Panagal Maaligai,
No.1, Jeenis Road, Saidapet, Chennai - 600 015.

... RESPONDENTS

Sl. No.	Date	Description of Documents	Page Nos.
1	02.01.2024	Comprehensive Analysis Report for optimal transportation route conducted by University of Madras	1
2	21.06.2022	Environmental Clearance issued by SEIAA Tamil Nadu	14
3	16.08.2022	Environmental Clearance issued to SEIAA Kerala	45

Dated at Chennai on this 8th day of January, 2024



COUNSEL FOR APPELLANT

1

**COMPARATIVE ANALYSIS REPORT
FOR OPTIMAL TRANSPORTATION
ROUTE SELECTION FOR THE
PROPOSED ROUGH STONE QUARRY
PROJECT**

Submitted to

SRI SAI INFRASTRUCTURES

Magaral- B Village

Walajabad Taluk

Kancheepuram District

Tamil Nadu State

Study Conducted by



DEPARTMENT OF GEOLOGY

University of Madras

Chennai – 600 025

JANUARY, 2024



Dr. P.SARAVANAN, Ph.D

UNIVERSITY OF MADRAS

[Established under the Act of Incorporation XXVII of 1857- Madras University Act 1923]
[State University]

DEPARTMENT OF GEOLOGY

Guindy Campus, Chennai - 600 025, INDIA

Ph: +91-44-2220 2786, Email: saravananpanchatcharam@gmail.com

02.01.24

From

Dr.P.Saravanan

Assistant Professor

Department of Geology

University of Madras

Guindy campus, Chennai -25

To,

SRI SAI INFRASTRUCTURES,

Magaral - B Village,

Walajabad Taluk,

Kancheepuram District

Sub: Report on the comparative analysis for optimal transportation route selection for the proposed 'Rough Stone Quarry Project' at Magaral Village, Walajabad Taluk Kanchipuram District – submitted- Reg:-

As per your request we have carried out a detailed investigation of the suitable route selection of the requested study area. Accordingly, I am herein submitting a detailed report of the study area, covering the Patta land over an extent of 2.64.50 hectares at S.F. Nos. 728/2, 728/3, 728/4, 728/5, 728/6, 728/7, 728/8, 728/9, 728/10, 728/11, 728/12, 728/13, 728/14, 728/15, 728/16, 728/17 & 728/18 of Magaral - B Village, Walajabad Taluk, Kancheepuram District.

Yours faithfully

(Dr.P.Saravanan)

Dr. P. SARAVANAN, M.Sc., Ph.D.
Assistant Professor
Department of Geology
University of Madras
(Guindy Campus)
Chennai - 600 025

Title: Comparative Analysis Report for Optimal Transportation Route Selection for the Proposed Rough Stone Quarry Project

at Magaral Village, Walajabad Taluk – Kanchipuram District.

Executive Summary:

This report presents a comprehensive comparative analysis to determine the optimal transportation route for the proposed rough stone quarry project of SRI SAI INFRASTRUCTURES, at Patta land - Over an extent of 2.64.50 hectares at S.F. Nos. 728/2, 728/3, 728/4, 728/5, 728/6, 728/7, 728/8, 728/9, 728/10, 728/11, 728/12, 728/13, 728/14, 728/15, 728/16, 728/17 & 728/18 of Magaral- B Village, Walajabad Taluk, Kancheepuram District - Tamil Nadu State.

The project involves the extraction of rough stones and their transportation to nearby crushers, namely Golden Crusher (0.52 Km), SRMK (2.03 Km), and BGR (2.88 Km) and gravel to other needy areas. Considering environmental, social, and economic factors, this report aims to identify the best route that minimizes impact and maximizes overall project efficiency.

4

1. Introduction:

The objective of the proposed rough stone quarry project is to meet the escalating demand for construction materials. This report focuses on selecting the most suitable transportation route, taking into account of *Route A* and *Route B* which connects the proposed site with the State Highway 118 – A on the Eastern side of the proposed site. (*Route A via Magaral Village and Route B via Perumanallur Village Road*).

2. Comparative Analysis:

a. Proximity to the State High Way 118 A:

The Major highway is the State High Way 118 A which exists on the Eastern Side of the proposed site for both *Route A* and *Route B*.

Route A: 3.67 Km

Route B: 2.82 Km

b. Width of the Roads:

Route A: 4 m

Route B: 7 m

c. Environmental Impact:

Route A: Longer distance, potential for noise and dust pollution.

Route B: Shorter distance, recently laid pucca blacktop road, reduced environmental impact.

5

d. Infrastructure and Road Quality:

Route A: Direct access to State Highway 118-A thru Magaral Village and it is an old Road with pot holes.

Route B: Connects to the State Highway 118-A thru **recently laid pucca blacktop road by the Crusher Owners' Association.**

e. Social Impact:

Route A: Passes through a village and school, potential for social disruption.

Route B: No human habitats along the route, minimized social impact.

f. Economic Considerations:

Route A: Longer transportation distance, potentially higher operational costs.

Route B: Shorter distance, potential cost savings in fuel and maintenance.

3. Distance to Crushers:

- a. Golden Crusher: Located 0.52 Km from the proposed site.
- b. SRMK: Located 2.03 Km from the proposed site.
- c. BGR: Located 2.88 Km from the proposed site.

6

S. No	Description	Route A	Route B
1.	Width	4 m	7 m
2.	Proximity to SH 118-A	3.67 Km	2.82 Km
3.	Approach Road from Proposed site to Routes	0.24 Km	0.48 Km
4.	Human habitats	Yes. Magaral Village	Nil
5.	Road Quality	Old road with pot holes	Newly laid pucca Black Top Road
6.	Operational Cost	Higher	Lesser
7.	Environmental Impact	Potential for Noise and dust pollution	Reduced Environmental Impact.

Table 1: Route A and B comparison

4. Material Transportation Plan:

Rough stones / boulders will be transported exclusively to nearby crushers which are located within 2.8 Km radius and a minimum of 700 meters from the village and both the routes doesn't make any significance in that aspect expect the width of the roads in which the Route B has advantage (higher width).

Only gravel will be transported beyond 2.8 Km, specifically via Route B.

5. Recommendation:

After considering all factors, **Route B via Perumanallur village Road remains the recommended choice** for transporting rough stones and Gravel in the proposed quarry project. Its shorter distance, superior road quality, and minimal environmental and social impact align with the project's goals. Additionally, the proximity of the crushers, including Golden Crusher within 0.52 Km, further supports the efficiency of Route B.

6. Conclusion:

This report concludes that **Route B via Perumanallur village Road is the optimal choice** for the transportation of rough stones, boulders, and gravel in the proposed quarry project. The proximity of crushers, the material transportation plan, and the alignment with environmental and social goals make Route B the most favourable option.

End of Report.

Date of Survey: 27.12.2023



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Assistant Professor
Department of Geology
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Chennai - 600 025.

SRI SAI INFRASTRUCTURES



P.U. Middle School, Magaral

P.U. Middle School of Magaral is located **4.10** kilometers (2.55 Km Aerial Distance) away from the Proposed Site. Rough stones/boulders will be transported solely to nearby crushers within a 2.8 Km radius which is marked in white colour (oval shape). And the crushers are situated at least 700 meters from the village. The optimal route for transporting materials in the proposed quarry project is Route B via Perumanallur village Road. Hence, there is absolutely no necessity to use the Route A (Road runs through Magaral Village) that passes through P.U. Middle School in Magaral village.

INDEX	
Date of Survey:	27.12.2023
Proposed Site	
State Highway 118- A	
Route A	
Distance:	3.67 Km
Width:	4 Meter
Route B	
Distance:	2.82 km
Width:	7 Meter
Approach Road	
Distance from Proposed Site to Route A	= 0.24 Km
Distance from Proposed Site to Route B	= 0.48 Km
Nearby Crushers:	
1. Golden Crusher:	0.52 Km from the Proposed Site
2. SRMK Crusher:	2.03 Km from the Proposed Site
3. BGR Crusher:	2.88 Km from the proposed site

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Route A via Magaral Village



Route A via Magaral Village



Route B via Perumanallur Village Road



Route B via Perumanallur Village Road



ENVIRONMENTAL
CLEARANCE

Government of India
Ministry of Environment, Forest and Climate Change
(Issued by the State Environment Impact Assessment
Authority(SEIAA), Tamil Nadu)

To,

The Proprietor
LOGANATHAN

Rajanagaram,Kandapuram,R.K.Pettai, Pallipattu Taluk, Tiruvallur District -
631303

Subject: Grant of Environmental Clearance (EC) to the proposed Project Activity
under the provision of EIA Notification 2006-regarding

Sir/Madam,

This is in reference to your application for Environmental Clearance (EC)
in respect of project submitted to the SEIAA vide proposal number
SIA/TN/MIN/224104/2021 dated 11 Aug 2021. The particulars of the environmental
clearance granted to the project are as below.

1. EC Identification No.	EC22B001TN113131
2. File No.	7317/2019
3. Project Type	New
4. Category	B2
5. Project/Activity including Schedule No.	1(a) Mining of minerals
6. Name of Project	G.S.LOGANATHAN, Rajanagaram (Kandapuram) Village Rough stone quarry
7. Name of Company/Organization	LOGANATHAN
8. Location of Project	Tamil Nadu
9. TOR Date	N/A

The project details along with terms and conditions are appended herewith from page
no 2 onwards.

Date: 21/06/2022

(e-signed)
Thiru.Deepak S.Bilgi
Member Secretary
SEIAA - (Tamil Nadu)

*Note: A valid environmental clearance shall be one that has EC identification
number & E-Sign generated from PARIVESH.Please quote identification
number in all future correspondence.*

This is a computer generated cover page.

PARIVESH

(Pro-Active and Responsive Facilitation by Interactive,
and Virtuous Environmental Single-Window Hub)





**THIRU.DEEPAK S.BILGI, I.F.S.,
MEMBER SECRETARY**

**STATE LEVEL ENVIRONMENT IMPACT
ASSESSMENT AUTHORITY – TAMIL NADU**
3rd Floor, Panagal Maaligai,
No.1, Jeenis Road, Saidapet,
Chennai-15.
Phone No. 044-24359973
Fax No. 044-24359975

ENVIRONMENTAL CLEARANCE

Lr. No.SEIAA-TN/F.No.7317/EC.No:5099/2022, dated: 17.06.2022

Sir/Madam,

Sub: SEIAA-TN – Proposed Rough Stone Quarry lease area over an extent an extent of 1.00.0Ha located at S.F.No.145(Part), Rajanagaram (Kandapuram) Village, Pallipattu Taluk, Tiruvallur District, Tamil Nadu by Thiru.G.S.Loganathan – under Category “B2” of Item 1(a) “Mining of Minerals Projects” of the Schedule to the EIA Notification, 2006 issue of Environmental Clearance – Regarding.

- Ref:**
1. Online Proposal No.SIA/TN/MIN/128938/2019, dated: 02.12.2019
 2. Your Application for Environmental Clearance dated: 09.12.2019.
 3. Minutes of the 169th SEAC meeting held on 07.08.2020.
 4. Minutes of the 399st SEIAA meeting held on 24.09.2020.
 5. Minutes of the 186th SEAC meeting held on 21.11.2020.
 6. Minutes of the 417st SEIAA meeting held on 04.01.2022, 05.01.2022 & 06.01.2022.
 7. Proponent Revised Online Proposal No. SIA/TN/MIN/224104/2021 dated: 11.08.2021.
 8. Proponent revised Application for Environmental Clearance dated: 17.09.2021.
 9. Minutes of the 244th SEAC meeting held on 09.02.2022.
 10. Minutes of the 276th SEAC meeting held on 21.05.2022.
 11. Minutes of the 521st SEIAA meeting held on 17.06.2022.

**MEMBER SECRETARY
SEIAA-TN**

Details of Minor Mineral Activity:-

This has reference to your application 7th & 8th cited. The proposal is for obtaining Environmental Clearance for mining / quarrying of minor minerals based on the particulars furnished in your application as shown below.

S.N	Particulars	Details furnished
1.	Name of the Owner/Firm	Thiru. G.S. Loganathan S/o. Thiru. P. Srinivasan Rajanagaram, Kandapuram R.K. Pettai Post Tiruvallur District - 631 303
2.	Type of quarrying (Savudu/Rough Stone/Sand/Granite)	Rough stone
3.	S.F No. Of the quarry site with area break-up	145 (Part)
4.	Village in which situated	Rajanagaram (Kandapuram)
5.	Taluk in which situated	Pallipattu
6.	District in which situated	Tiruvallur
7.	Extent of quarry (in ha.)	1.00.0Ha
8.	Latitude & Longitude of all corners of the quarry site	13°11'16.63" to 13°11'19.95"N 79°25'08.90" to 79°25'12.98"E
9.	Topo Sheet No.	57 - O/8
10.	Type of mining	Opencast Manual Mining (Non-explosive techniques such as feather and wedge as recommended by SEAC)
11.	Period of quarrying proposed	5 years
12.	Production (Quantity in m ³)	71068m ³ of Rough stone
13.	Depth of quarrying	32m from hill top
14.	Depth of water table	20m bgl
15.	Man Power requirement per day:	10 Nos.


MEMBER SECRETARY
SEIAA-TN

16.	Source of Water Requirement	Water canes
17.	Water requirement: 1. Drinking & domestic purposes (in KLD) 2. Dust suppression , Green Belt &Wet Drilling (in KLD)	4.0KLD 1.3 KLD 2.7KLD
18.	Power requirement	TNEB
19.	Whether any habitation within 300m distance	No
20.	Precise area communication approved by Assistant Director (i/c), with date	Na.Ka.No.81/2018/Kanimam-2, dated 24.04.2018
21.	Mining Plan approved by Assistant Director (i/c), Directorate of Geology and Mining with date	Rc.No.81/2018/G&M-2 dated 29.07.2021
22.	Assistant Director (i/c), Department of Geology and Mining 500m cluster letter	Rc.No.81/2018/G&M-2 dated 29.07.2021
23.	VAO certificate regarding 300m radius cluster	Letter 25.01.2021
24.	Project Cost (excluding EMP cost)	Rs. 64.35 Lakhs
25.	EMP cost	Rs.3.90 Lakhs
26.	CER cost	Rs. 2 lakhs As per SEAC Minutes Developing Library Facilities to Government High school, Rajanagaram Village. Planting of trees in and around the school
27.	<p><u>Validity:</u> This Environmental Clearance is granted for the production in 71068m³ of Rough stone for the period of 5 Years from the date of execution of the mining lease and ultimate depth of mining upto 32m from hill top.</p>	


MEMBER SECRETARY
SEIAA-TN

Affidavit

The Proponent has furnished affidavit (dated: 17/09/2021) in fifty Rupees stamp paper attested by the Notary stating that

I, Thiru. G.S. Loganathan, S/o. Thiru. P. Srinivasan, Rajanagaram, Kandapuram, R.K. Pettai Post, Tiruvallur District - 631 303, Tamil Nadu State, Solemnly declare and sincerely affirm that,

I have applied for getting prior Environment Clearance in SEIAA, Tamil Nadu for quarry lease for Rough Stone Quarry lease area over an extent an extent of 1.00.0Ha located at S.F.No.145 (P), Rajanagaram (Kandapuram) Village, Pallipattu Taluk, Tiruvallur District, Tamil Nadu.

We hereby affirm that we will not do blasting operation in the proposed quarry.

1. I swear to state and confirm that within 10km area of the quarry site, I have applied for Environment Clearance none of the following is situated as per the General Conditions of EIA notification, 2006.
 - a. Protected areas notified under the wild life (Protection) Act, 1972
 - b. Critically polluted areas as notified by the CPCB constituted under water (Prevention and Control of Pollution) Act, 1974.
 - c. Eco-Sensitive areas identified by the Forest Dept/ State Govt.
 - d. International boundary within the 10km radius from the proposed site.
2. I will complete the following Corporate Environment Responsibility (CER) activities before commencement of the quarrying activities in addition to CSR and EMP.

CER Activity	Total Project Cost(Rs.) Lakhs	CER Cost 2.0% of project cost (Rs. Lakhs)
Develop sanitary facilities to Government High School, Rajanagaram (Kanbdapuram) Village.	64.35	1.287
Total Cost Allocation	64.35	1.287

3. The quarries are located within 500m radius from the periphery of our quarry.

Proposed Quarries:

S.No	Name of the Owner	Village & S.F.Nos	Extent	Lease Status

MEMBER SECRETARY
SEIAA-TN

1	G.S.Loganathan	Rajanagaram (Kandapuram) Village & S.F.Nos. 145(P)	1.00.0	proposed
Total			1.00.0	

Existing Quarries:

S.No	Name of the Owner	Village & S.F.Nos	Extent (in Hects)	Lease Status
1	P.Subramani	Ammaiyarkuppam Village & SF.No.263/1 (P)	1.00.0	03.01.2020 to 02.01.2030
Total Extent			1.00.0	

Abandoned or Expired Quarries:

S. No	Name of the Owner	Village & S.F.Nos	Extent (in Hects)	Classification of land
1	P.Subramani	Ammaiyarkuppam Village & SF.No.263/1 (P)	2.69.0	02.01.2003 to 01.01.2008
2	P.Subramani	(kandapuram) Village & S.F.Nos. 146(P)	0.42.5	21.06.2007 to 20.06.2012
Total			2.69.0	

4. There will not be any hindrance or disturbance to the people living no enrout / nearby my quarry site transporting the mined out material and due to quarrying activities.
5. There are no habitations/villages located within 100m radius from the periphery of my quarry.
6. I swear that afforestation will be carried out during the course of quarrying operation and maintained.
7. The required insurance will be taken in the name of the labourers working in my proposed quarry.
8. The existing roads from the main road to the quarry is in good condition and the same will be maintained and utilized for transportation of mineral.


MEMBER SECRETARY
SEIAA-TN

9. I will not engage any child labour in our quarry site and I aware that engaging child labour is punishable under the law.
10. All types of safety / protective equipment will be provided to all the labourers working in my quarry.
11. No permanent structures, temples etc., are located within 500m radius from the periphery of our quarry.
12. The quarrying activity has not yet commenced and it will be carried out only after obtaining Environmental Clearance.

Details of 500M radius Proposed quarry:

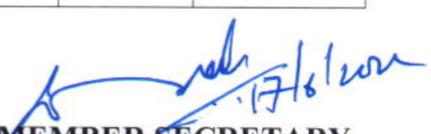
The Project Proponent has submitted a copy of the letter obtained from the Assistant Director(i/c), Department of Geology & Mining, Tiruvallur District in his letter Rc.No.81/2018/G&M-2 dated 29.07.2021 has stated that the details of other quarries (Proposed / Existing / Abandoned Quarries) within a radius 500m from the boundary of the proposed quarry site as follows:

i. Details of Existing Mines / Quarries

Sl.No	Name of the lease	Village & Taluk	S.F.Nos	Extent	Name of the Mineral	Remarks
1	Thiru.P.Suparamani, S/o.Periyasamy, kandapuram village, R.K.Pet Taluk, Tiruvallur District	Ammayarkuppam Village, R.K.Pet Taluk	263/1(P)	1.00.0	Rough Stone	Lease period 03.01.2020 to 02.01.2030

ii. Details of Abandoned / Expired Quarries:

Sl.No	Name of the lease	Village & Taluk	S.F.Nos	Extent	Name of the Mineral	Remarks
1	Thiru.P.Suparamani, S/o.Periyasamy, kandapuram village,	Ammayarkuppam Village, R.K.Pet Taluk	263/1(P)	2.69.0	Rough Stone	(Expired quarry) 02.01.2003


MEMBER SECRETARY
SEIAA TN

	R.K.Pet Taluk, Tiruvallur District					to 01.01.2003
2	Thiru.P.Suparamani, S/o.Periyasamy, kandapuram village, R.K.Pet Taluk, Tiruvallur District	Kandapuram Village, R.K.Pet Taluk	146/(P)	0.42.5		(Expired quarry) 21.06.2007 to 20.06.2012

iii) Details of Proposed Mine / Quarries

Sl. No	Name of the lease	Village & Taluk	S.F.No	Extent	Name of the Mineral	Remarks
1	Thiru. G.S. Loganathan S/o. Thiru. P. Srinivasan Rajanagaram, Kandapuram R.K. Pettai Post Tiruvallur District - 631 303	Rajanagaram, Kandapuram village, R.K. Pettai Post Taluk	145 (P)	1.00.0	Rough Stone	-

Appraisal by SEAC:-

Proposed Rough Stone Quarry lease area over an extent an extent of 1.00.0 Ha located at S.F.No. 145 (P), Rajanagaram (Kandapuram)Village, Pallipattu Taluk, Tiruvallur District, Tamil Nadu by Thiru.G.S.Loganathan - For Environmental Clearance.

(SIA/TN/MIN/224104/2021 dated: 02/12/2019)

The proposal was placed for appraisal in this 276th meeting of SEAC held on 21.5.2022. The details of the project furnished by the proponent are given in the website (parivesh.nic.in).

The SEAC noted the following:

1. The project proponent, Thiru. G.S.Loganathan has applied for Environmental Clearance for the proposed Rough Stone Quarry lease area over an extent an extent of 1.00.0 Ha located at S.F.No.145(P), Rajanagaram (Kandapuram)Village, Pallipattu Taluk, Tiruvallur District, Tamil Nadu.

(Signature)
MEMBER SECRETARY
SEEA-TN

2. The project/activity is covered under Category "B2" of Item 1 (a) "Mining of Minerals Projects" of the Schedule to the EIA Notification, 2006.
3. From the Google map, it has been observed that a shed not belonging to the owner is situated at a distance of 92.4 m from the lease boundary of the proposed quarry.

Earlier, this proposal was already placed in the 169th SEAC Meeting held on 07.08.2020 & 244th meeting of SEAC held on 09.02.2022. The project proponent gave detailed presentation.

Based on the presentation made by the proponent and the documents furnished, SEAC noted that habitation is located at 150 m to the proposed project site. Further, it was reported from the SEIAA office "No legal issues. It is a Poramboke land". However, the Hon'ble NGT, Principal bench, New Delhi in O.A.No.304/2019 order dated 21.07.2020 stated the following:

"3. Accordingly, the CPCB has filed its report on 09.07.2020 concluding as follows:

6.0 Conclusion:

In view of available information, following minimum distance criteria may be considered for permitting stone quarry by SPCBs:

Mining Type		Minimum distance	Locations
A.	When Blasting is not involved	100 m	Residential/public buildings, inhabited sites location to be considered by States
B.	When Blasting is involved	200 m	

** Note: The regulations for danger zone (500 m) prescribed by Directorate General of Mines Safety also have to be complied compulsorily and necessary measures should be taken to minimize the impact on environment.

However, if any state is already having stringent criteria than the above for minor minerals mining (i.e. more prescribed distances than the above), the same shall be applicable.

4. In the view of the above, the said criteria be followed throughout India.

The CPCB may monitor compliance. A copy of this order be sent to the CPCB and all the state PCBs/PCCs by email for compliance."


MEMBER SECRETARY
SEIAA-TN

After detailed deliberation, the SEAC decided to get necessary clarification from the SEIAA about the above points. After getting the clarification from SEIAA, the subject shall be placed before SEAC for appraisal. Further, necessary instruction shall be issued to the SEIAA office about the above said order.

The proposal was placed in the 399th Authority meeting held 24.09.2020. After detailed discussions, the Authority decided to follow the Rule 36 (1-A) of Tamil Nadu Minor Mineral Concession Rules, 1959 as amended as which states as follows,

(a)"No lease shall be granted for quarrying stone within 300m from any habitated site"

(iii) "Inhabited site mean a village site or town site or house site or layout approved by a local body or town or country or metropolitan planning authority where the said Body or Authority is located under a state and empowered to approve such an area as a house site or layout area"

SEAC shall follow the aforesaid for processing of files relating to minor minerals. MS-SEIAA shall communicate the above decision to SEAC as requested.

Based on the above decision of Authority, the proposal was again discussed in the 186th SEAC meeting held on 21.11.2020. The SEAC has noted as follows,

1. It was found that habitations were located within 150m of the proposed project site.
2. The location of the habitations around this proposed quarry was verified by SEAC today, on the Google Map.
3. It was found that there was a village approximately 150 m of the proposed quarry site. Also re-examining the VAO certificate for this proposal, the VAO certificate is based on enquiry, but not on actual site visit.

Hence, considering Google map as authenticate, as per SEIAA direction in its 399th meeting held on 24.09.2020, mentioned above, the proposal is not recommended.

The proposal was placed in the 417th Authority meeting held on 04.01.2021, 05.01.2021 & 06.01.2022. The Authority discussed in detail and noted that the SEAC in its 186th meeting held on 10.10.2020 has recommended as follows,


MEMBER SECRETARY
SEIAA-TN

“It was found that habitations were located within 150m of the proposed project site. The location of the habitations around this proposed quarry was verified by SEAC today, on the Coogle Map. It was found that there was a village approximately 150 m of the proposed quarry site. Also re-examining the VAO certificate for this proposal, the VAO certificate is based on enquiry, but not on actual site visit. Hence, considering Google map as authenticate, as per SEIAA direction in its 399th meeting held on 24.09.2020, mentioned above, the proposal is not recommended”

In view of the above, the Authority decided to reject the proposal for the reason as recommended by SEAC subject to condition that any appeal against this decision shall be made with the Hon'ble NGT, if preferred within a period of 30 days as prescribed under section 16 of the NGT Act, 2010.

Hence the project proponent has approached the NGT appeal No.51 of 2021(SZ) dated 13.07.2021 and prepared modified the Mining Plan without involving blasting operation to justify the direction of NGT order and got approval from Dept. of Geology & Mining.

The proposal was now placed for appraisal in this 244th meeting of SEAC held on 09.02.2022.

After examining the documents & project proposals furnished by the project proponent and based on the presentations & detailed deliberations, SEAC observed that the modified mining plan was not revised in terms of production, Hence SEAC have decided to ask the Proponent to justify the similar level of production as indicated in both approved Mining Plan involving Drilling & Blasting and Modified Mining Plan involving Hydraulic Rock Breakers (without blasting) for the breakage & production of adequate material for excavation/production.

Since it has been noted from the Google map that a shed not belonging to the owner is situated at a distance of 92.4 m from the lease boundary of the proposed quarry, the SEAC also decided to make an on- site - spot inspection to assess the status of the site by the sub-committee constituted by the SEAC.

On receipt of the Inspection report from sub-committee, SEAC would further deliberate on this project and decide the further course of action. Hence the SEAC has decided to defer the proposal.


MEMBER SECRETARY
SEIAA-TN

A subcommittee comprising the Thiru. D. VELAZHAGAN, Member SEAC – TN & Dr. P. BALAMADESWARAN, Member SEAC – TN was constituted by SEAC to inspect and study the field condition in the proposal seeking the grant of Environmental Clearance for the proposed rough stone quarry on 22.04.2022 (Monday) vide Lr. No. SEAC-TN/Site Inspection/2022 dated 03.03.2022, jointly with the Asst Director of Geology and Mining, Tiruvallur District.

OBSERVATIONS OF THE SUB-COMMITTEE

- This is a proposed quarry and applied for fresh lease. There were manual quarrying operations observed in the quarry is located on a hill slope adjacent to the fresh lease during the visit. It is noted that a group of 10-12 houses are located at a distance of 92 m from the northern side boundary of the fresh lease where the quarry is proposed.
- There is also a concrete-built structure house situated at a distance of 60 m from the boundary of the proposed site on the eastern side and it was constructed only after the application for grant of Environmental Clearance has been filed for the proposed quarry in the fresh lease.
- The proprietor of the house - Thiru. Subramanian, who lives in the same house, is also the owner of a rough stone quarry being operated manually adjacent to the above fresh lease where the quarry is proposed by Thiru. G.S. Loganathan.
- It has been learned that a group of 8 to 12 persons belonging to Thiru. Subramanian family has been involved in breaking of the rough stone blocks without adopting any heavy blasting operations by carrying out 'feather and wedge' method to reduce large masses of stone to smaller size.
- It has been observed in the aforesaid operating quarry that a row of shallow holes of 32-34 mm diameter is made along the line with the help of a compressor-operated jack hammer drill, where a break is desired, with the spacing of 15–20 cm apart. Then, the feathers consist of two iron strips flat on one side for contact with the wedge and curved on the other to fit the wall of the drill hole (as shown in the photographs given in the Annexure). They are placed in the hole and the plug (a steel wedge) is placed between them. They are being sledged lightly in succession until a fracture appears. Wherever possible, such fractures are made parallel with the rift of the stone.


MEMBER SECRETARY
SEAC-TN

- In addition to the above mentioned, there are other techniques that, with more or less success, are sometimes used in this rough stone quarrying is that a high temperature jet flame applied for making channels in the surface of the charnockite rock. This high temperature makes quartz-grains expand, with pulverization of the rock as a result. It effectively works properly for quartz rich rocks. The use of this method is declining, especially since it is extremely dusty and because it is difficult to do other work in the quarry during channelling.
- During the above process, it was informed that a day production of 30 to 34 cbm rough stone comprises of the small blocks and large pillar stones are only produced in 6-hour duration spread over the day time with adequate rest intervals for the workmen.
- It was also noted that the weathered top layer covering the massive rough stone has been used for construction of safety berms (bunds) along the boundary of the quarry
- Here, the proprietor of the house - Thiru. Subramanian, who has welcomed the proposed quarry of Thiru. G.S. Loganathan as the manual type mining operations with minimal daily production will not affect the surrounding environment and given his consent for the commencement of quarrying operations.
- No Green belt has been raised and no fencing was installed on the southern side of the operating quarry.
- It is also learned from Thiru. V. Saravanan, Sub-Inspector of Surveying and Thiru, P. Anbazhagan, Village Administrative Officer (VAO) that no habitats were existing at the time when lease was granted to Thiru. G.S. Loganathan in 2019.
- Further, a length of 10-15 m has been left at the northern side of the quarry lease to facilitate a minimum distance of 100 m from the existing house not belonging to the owner as required under the NGT order and the same will be used for greenbelt development.
- It was also informed that the proponent - Thiru. G.S. Loganathan, who is also currently the Panchayat President of the Rajanagaram (Kandapuram) Village, providing the necessary support for developing the infrastructure facilities in the village.


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SEIAA-TN

RECOMMENDATIONS OF THE SUB COMMITTEE

1. The Fencing shall be installed around the boundary of the proposed quarry, as per rule 36(4) of Tamil Nadu Minor Mineral Concession Rules, 1959.
2. The Greenbelt may be raised covering a width of 10 m all around the quarry site.
3. The Subcommittee has asked the proponent to submit the following documents to consider the grant of Environmental Clearance for the aforesaid quarry:
 - i. A copy of the letter from the Village Administrative Officer that there is no inhabited sites are located within a radius of 300 m from the proposed quarry site to satisfy the provisions of the Rule 36 (1) & (1-A) of the Tamil Nadu Minor Mineral Concession Rules, 1959 at the time of grant of lease.
 - ii. A copy of the letter obtained from the proprietor of the house - Thiru. P. Subramani a concrete-built structure house situated at a distance of 60 m on the eastern side of the proposed site stating that it was constructed only after the application for grant of Environmental Clearance has been filed for the proposed quarry in the fresh lease and no objections for the proposed quarry site.

The SEAC sub-committee have recommended that in view of protecting the structures of the above houses in the nearest village, (i) the quarrying operations shall be concentrated only in the southern and lower side of the existing lease more than at a distance of 100 m leaving adequate safety barrier from nearest house located in the village; (ii) the non-explosive technique such as feather and wedge shall be exclusively adopted for the quarrying the blocks of rough stone rock.

Hence, the sub-committee opines the proposal for the grant of Environmental Clearance for proposed Rough Stone quarry lease over an extent of 1.00.0 ha in S.F.No. 145 (P) at Rajanagaram (Kandapuram) Village, Pallipattu Taluk, Tiruvallur District, Tamil Nadu may be considered as it involved manual mode of quarrying the rock stones without adopting the blasting operation.

This proposal has again been placed in 276th SEAC meeting held on 21.5.2022, based on the sub committee's report SEAC decided to SEAC decided to **recommend the proposal**

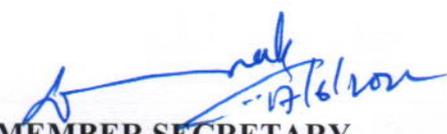

 17/6/2022
MEMBER SECRETARY
SEAA-TN

for the grant of Environmental Clearance subject to the following specific conditions, in addition to normal conditions stipulated by MOEF &CC.

1. The quarrying operations shall be concentrated only in the southern and lower side of the existing lease more than at a distance of 100 m leaving adequate safety barrier from nearest house located in the village.
2. **The non-explosive technique such as feather and wedge shall be exclusively adopted for the quarrying the blocks of rough stone rock.**
3. The proponent shall mandatorily appoint the required number of statutory officials and the competent persons in relevant to the proposed quarry size as per the provisions of Mines Act 1952 and Metalliferrous Mines Regulations, 1961.
4. The proponent shall erect fencing all around the boundary of the proposed area with gates for entry/exit before the commencement of the operation and shall furnish the photographs/map showing the same before obtaining the CTO from TNPCB.
5. Perennial maintenance of haulage road/village / Panchayat Road shall be done by the project proponent as required in connection with the concerned Govt. Authority.
6. The Project proponent shall adhere to the working parameters of mining plan which was submitted at the time of EC appraisal wherein year-wise plan was mentioned for total excavation i.e. quantum of mineral, waste, over burden, inter burden and top soil etc.. No change in basic mining proposal like mining technology, total excavation, mineral & waste production, lease area and scope of working (viz. method of mining, overburden & dump management, O.B & dump mining, mineral transportation mode, ultimate depth of mining etc.) shall not be carried out without prior approval of the Ministry of Environment, Forest and Climate Change, which entail adverse environmental impacts, even if it is a part of approved mining plan modified after grant of EC or granted by State Govt. in the form of Short Term Permit (STP), Query license or any other name.
7. The reject/waste generated during the mining operations shall be stacked at earmarked waste dump site(s) only. The physical parameters of the waste dumps like height, width and angle of slope shall be governed as per the approved Mining Plan as per the guidelines/circulars issued by DGMS w.r.t. safety in mining operations shall be strictly adhered to maintain the stability of waste dumps.


MEMBER SECRETARY

8. The proponent shall ensure that the slope of dumps is suitably vegetated in scientific manner with the native species to maintain the slope stability, prevent erosion and surface run off. The gullies formed on slopes should be adequately taken care of as it impacts the overall stability of dumps.
9. Perennial sprinkling arrangement shall be in place on the haulage road for fugitive dust suppression. Fugitive emission measurements should be carried out during the mining operation at regular intervals and submit the consolidated report to TNPCB once in six months.
10. The Proponent shall ensure that the Noise level is monitored during mining operation at the project site for all the machineries deployed and adequate noise level reduction measures undertaken accordingly. The report on the periodic monitoring shall be submitted to TNPCB once in 6 months.
11. Proper barriers to reduce noise level and dust pollution should be established by providing greenbelt along the boundary of the quarrying site and suitable working methodology to be adopted by considering the wind direction.
12. The purpose of Green belt around the project is to capture the fugitive emissions, carbon sequestration and to attenuate the noise generated, in addition to improving the aesthetics. A wide range of indigenous plant species should be planted as given in the appendix in consultation with the DFO, State Agriculture University and local school/college authorities. The plant species with dense/moderate canopy of native origin should be chosen. Species of small/medium/tall trees alternating with shrubs should be planted in a mixed manner.
13. Taller/one year old Saplings raised in appropriate size of bags, preferably eco-friendly bags should be planted with proper spacing as per the advice of local forest authorities/botanist/Horticulturist with regard to site specific choices. The proponent shall earmark the greenbelt area with GPS coordinates all along the boundary of the project site with at least 3 meters wide and in between blocks in an organized manner
14. Ground water quality monitoring should be conducted once in every six months and the report should be submitted to TNPCB.
15. The operation of the quarry should not affect the agricultural activities & water bodies near the project site and a 50m safety distance from water body should be maintained without carrying any activity. The proponent shall take appropriate


MEMBER SECRETARY

- measures for “Silt Management” and prepare a SOP for periodical de-siltation indicating the possible silt content and size in case of any agricultural land exists around the quarry.
16. The proponent shall provide sedimentation tank / settling tank with adequate capacity for runoff management.
 17. The proponent shall ensure that the transportation of the quarried materials shall not cause any hindrance to the Village people/Existing Village Road and shall take adequate safety precautionary measures while the vehicles are passing through the schools / hospital.
 18. The Project proponent shall ensure that the road may not be damaged due to transportation of the quarried rough stones; and transport of rough stones will be as per IRC Guidelines with respect to complying with traffic congestion and density.
 19. To ensure safety measures along the boundary of the quarry site, security guards are to be posted during the entire period of the mining operation.
 20. After mining operations are completed, the mine closure activities as indicated in the mine closure plan shall be strictly carried out by the Proponent fulfilling the necessary actions as assured in the Environmental Management Plan.
 21. The Project proponent shall, after ceasing mining operations, undertake re-grassing the mining area and any other area which may have been disturbed due to their mining activities and restore the land to a condition that is fit for the growth of fodder, flora, fauna etc.
 22. The Project proponent shall comply with the provisions of the Mines Act, 1952, MMR 1961 and Mines Rules 1955 for ensuring safety, health and welfare of the people working in the mines and the surrounding habitants.
 23. The project proponent shall ensure that the provisions of the MMRD, 1956, the MCDR 2017 and Tamil Nadu Minor Mineral Concession Rules 1959 are complied by carrying out the quarrying operations in a skillful, scientific and systematic manner keeping in view proper safety of the labour, structure and the public and public works located in that vicinity of the quarrying area and in a manner to preserve the environment and ecology of the area.
 24. The quarrying activity shall be stopped if the entire quantity indicated in the Mining plan is quarried even before the expiry of the quarry lease period and the same shall


MEMBER SECRETARY

be informed to the District AD/DD(Geology and Mining) District Environmental Engineer (TNPCCB)and the Director of Mines Safety (DMS), Chennai Region by the proponent without fail.

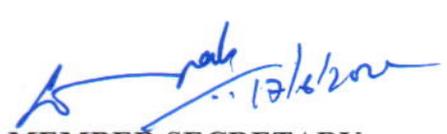
25. The Project proponent shall abide by the annual production scheduled specified in the approved mining plan and if any deviation is observed, it will render the Project proponent liable for legal action in accordance with Environment and Mining Laws.
26. Prior clearance from Forestry & Wild Life including clearance from committee of the National Board for Wildlife as applicable shall be obtained before starting the quarrying operation, if the project site attracts the NBWL clearance, as per the existing law from time to time.
27. All the conditions imposed by the Assistant/Deputy Director, Geology & Mining, concerned District in the mining plan approval letter and the Precise area communication letter issued by concerned District Collector should be strictly followed.
28. The Project proponent shall install a Display Board at the entrance of the mining lease area/abutting the public Road if applicable, about the project as per Appendix – II of these minutes.
29. The recommendation for the issue of environmental clearance is subject to the outcome of the Hon'ble NGT, Principal Bench, New Delhi in O.A.No.186 of 2016 (M.A.No.350/2016) and O.A.No.200/2016 and O.A.No.580/2016 (M.A.No.1182/2016) and O.A.No.102/2017 and O.A.No.404/2016 (M.A.No.758/2016, M.A.No.920/2016, M.A.No.1122/2016, M.A.No.12/2017 & M.A.No.843/2017) and O.A.No.405/2016 and O.A.No.520 of 2016(M.A.No.981/2016, M.A.No.982/2016 & M.A.No.384/2017).
30. As per the MoEF& CC Office Memorandum F.No.22-65/2017-IA.III dated: 30.09.2020 and 20.10.2020 the proponent shall adhere EMP furnished.
31. As accepted by the Project proponent the CER cost is Rs. 2 lakh and the amount shall be spent for the following activities in Panchayat Union Middle School Vanur before obtaining CTO from TNPCCB.

Developing Library Facilities to Government High school, Rajanagaram Village.
Planting of trees in and around the school (As per Appendix-I).


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SEIAA-TN

Appendix -I
List of Native Trees Suggested for Planting

No	Scientific Name	Tamil Name	Tamil Name
1	<i>Aegle marmelos</i>	Vilvam	வில்வம்
2	<i>Adenaanthera pavonina</i>	Manjadi	மஞ்சாடி, ஆனைக்குன்றிமணி
3	<i>Albizia lebbek</i>	Vaagai	வாகை
4	<i>Albizia amara</i>	Usil	உசில்
5	<i>Bauhinia purpurea</i>	Mantharai	மந்தாரை
6	<i>Bauhinia racemosa</i>	Aathi	ஆத்தி
7	<i>Bauhinia tomentosa</i>	Iruvathi	இருவாத்தி
8	<i>Buchanania axillaris</i>	Kattuma	காட்டுமா
9	<i>Borassus flabellifer</i>	Panai	பனை
10	<i>Butea monosperma</i>	Murukkamaram	முருக்கமரம்
11	<i>Bobax ceiba</i>	Ilavu, Sevvilavu	இலவு
12	<i>Calophyllum inophyllum</i>	Punnai	புள்ளை
13	<i>Cassia fistula</i>	Sarakondrai	சரக்கொன்றை
14	<i>Cassia roxburghii</i>	Sengondrai	செங்கொன்றை
15	<i>Chloroxylon sweitenia</i>	Purasamaram	பரசு மரம்
16	<i>Cochlospermum religiosum</i>	Kongu, Manjallavu	கோங்கு, மஞ்சள் இலவு
17	<i>Cordia dichotoma</i>	Naruvuli	நருவுளி.
18	<i>Creteva adansonii</i>	Mavalingum	மாவிளங்கம்
19	<i>Dillenia indica</i>	Uva, Uzha	உசா
20	<i>Dillenia pentagyna</i>	SiruUva, Sitruzha	சிறு உசா
21	<i>Diospyro sebenum</i>	Karungali	கருங்காலி
22	<i>Diospyro schloroxylon</i>	Vaganai	வாகை
23	<i>Ficus amplissima</i>	Kallitchi	கல் இச்சி
24	<i>Hibiscus tiliaceou</i>	Aatrupoovarasu	ஆற்றுப்புவரசு
25	<i>Hardwickia binata</i>	Aacha	ஆச்சா
26	<i>Holoptelia integrifolia</i>	Aayili	ஆயா மரம், ஆயிலி
27	<i>Lansea coromandelica</i>	Odhiam	ஓதியம்
28	<i>Lagerstroemia speciosa</i>	Poo Marudhu	பூ மருது
29	<i>Lepisanthus tetraphylla</i>	Neikottaimaram	நெய் கொட்டை மரம்
30	<i>Limonia acidissima</i>	Vila maram	விலா மரம்
31	<i>Litsea glutinos</i>	Pisinpattai	அரம்பா. பிசின்பட்டை
32	<i>Madhuca longifolia</i>	Illuppai	இலுப்பை
33	<i>Manilkara hexandra</i>	UlakkaiPaalai	உலக்கை பாலை
34	<i>Mimusops elengi</i>	Magizhamaram	மகிழ்மரம்
35	<i>Mitragyna parvifolia</i>	Kadambu	கடம்பு
36	<i>Morinda pubescens</i>	Nuna	நுணா
37	<i>Morinda citrifolia</i>	Vellai Nuna	வெள்ளை நுணா
38	<i>Phoenix sylvestre</i>	Eachai	ஈச்சமரம்
39	<i>Pongamia pinnat</i>	Pungam	புங்கம்


MEMBER SECRETARY
SEIAA-TN

40	<i>Premna mollissima</i>	Munnai	முன்னை
41	<i>Premna serratifolia</i>	Narumunnai	நறு முன்னை
42	<i>Premna tomentosa</i>	Malaipoovarasu	மலை பூவரசு
43	<i>Prosopis cinerea</i>	Vanni maram	வன்னி மரம்
44	<i>Pterocarpus marsupium</i>	Vengai	வேங்கை
45	<i>Pterospermum canescens</i>	Vennangu, Tada	வெண்ணாங்கு
46	<i>Pterospermum xylocarpum</i>	Polavu	புலவு
47	<i>Puthranjiva roxburghii</i>	Karipala	கறிபாலா
48	<i>Salvadora persica</i>	Ugaa Maram	ஊகா மரம்
49	<i>Sapindus emarginatus</i>	Manipungan, Soapukai	மனிப்புங்கள் சோப்புக்காய்
50	<i>Saraca asoca</i>	Asoca	அசோகா
51	<i>Strobilus asper</i>	Piray maram	பிராய் மரம்
52	<i>Strychnos nuxvomica</i>	Yetti	எட்டி
53	<i>Strychnos potatorum</i>	Therthang Kottai	தேத்தான் கொட்டை
54	<i>Syzygium cumini</i>	Naval	நாவல்
55	<i>Terminalia belleric</i>	Thandri	தான்றி
56	<i>Terminalia arjuna</i>	Ven marudhu	வென் மருது
57	<i>Toona ciliata</i>	Sandhana vembu	சந்தன வேம்பு
58	<i>Thespesia populnea</i>	Puvarasu	பூவரசு
59	<i>Walsuratrifoliata</i>	valsura	வால்சுரா
60	<i>Wrightia tinctoria</i>	Veppalai	வெப்பாலை
61	<i>Pithecellobium dulce</i>	Kodukkapuli	கொடுக்காப்பூளி

Discussion by SEIAA and the Remarks:-

The proposal was placed in the 521st Authority meeting held on 17.06.2022. The Authority after detailed discussion with reference to specific condition (1) of SEAC, SEIAA decided to grant Environmental Clearance for a period of 5 years confining to the depth and the quantity as per approved mining plan issued by the Department of Geology & Mining subject to the standard conditions as per Annexure - (I) of SEAC minutes, other normal conditions stipulated by MOEF&CC & all other specific conditions as recommended by SEAC in addition to the following conditions.

1. As per the MoEF& CC office memorandum F.No.22-65/2017-IA.III dated: 30.09.2020 and 20.10.2020 accepted by the Project proponent the revised CER cost is Rs.2 lakhs and the amount shall be spent for the following activities in Governemnt School, Rajanagaram Village before obtaining CTO from TNPCB.
2. No trees in the area should be removed and all the trees numbered and protected. In case trees fall within the proposed come quarry site the trees may be transplanted in the Greenbelt zone.


MEMBER SECRETARY
SEIAA-TN

3. The proponent shall ensure that the activities should in no way result in disturbance to forest and trees in vicinity.
4. The proponent shall ensure that the operations shall not result in loss of soil biological properties and nutrients.
5. The activity should not result in CO₂ release and temperature rise and add to micro climate alternations.
6. The mining closure plan should be strictly adhered with appropriate soil rehabilitation measures to ensure ecological stability of the area.
7. Reclamation/Restoration of the mine site should ensure that the Geotechnical, physical, chemical properties are sustainable that the soil structure composition is buildup, during the process of restoration.
8. The proponent shall ensure that the activity does not disturb the movement of grazing animals and free ranging wildlife.
9. The proponent shall ensure that the activity does not disturb the biodiversity, the flora & fauna in the ecosystem.
10. The proponent shall ensure that the activity does not disturb the water bodies and natural flow of surface and ground water, nor cause any pollution, to water sources in the area.
11. The proponent shall ensure that the activities undertaken should not result in carbon emission, and temperature rise, in the area.
12. The proponent shall ensure that the mine closure plan are followed as per mining plan and the mine restoration should be done with native species, and site restored to near original status.
13. The proponent shall ensure that Monitoring be carried out with reference to the quantum of particulate matter during excavation; blasting; material transport and also from cutting waste dumps and haul roads.
14. The proponent shall ensure that the area is ecologically restored to conserve the ecosystems and ensure flow of goods and services.
15. The proponent shall ensure that the activities shall not disturb the agro biodiversity and agro farms.
16. The proponent shall ensure that the activity shall not result in invasion by invasive alien species.


MEMBER SECRETARY
SEIAA-TN

17. Actions to be taken to promote agro forestry, mixed plants to support biodiversity conservation in the mine restoration effort.
18. The proponent shall ensure that activity shall not deplete the indigenous soil seed bank and disturb the mycorrhizal fungi, soil organism, soil community nor result in eutrophication of soils and water.
19. The activities should not disturb the soil properties and seed and plant growth. Soil amendments as required to be carried out, to improve soil health
20. Bio remediation using an microorganisms should be carried out to restore the soil environment to enable carbon sequestration.
21. The proponent shall ensure that all mitigation measures listed in the EIA/EMP are taken to protect the biodiversity and natural resources in the area.
22. The proponent shall ensure that the activities should not impact the water bodies/wells in the neighbouring open wells and bore wells.
23. The proponent shall ensure that the activities should not in any way affect the water quantity and quality in the open wells and bore wells in the vicinity, nor impact the water table and levels.
24. The proponent shall ensure that in the green belt development more indigenous trees species (Appendix as per the SEAC Minutes) to be planted.
25. The proponent shall ensure that the activities should not disturb the resident and migratory birds.
26. The proponent shall ensure the area should be restored and rehabilitated with native trees as recommended SEAC Minutes (in Appendix).
27. The proponent shall ensure that the mine restoration should be done using mycorrhizal VAM, vermicasting, Biofertilizers to ensure soil health and, biodiversity conservation.
28. The proponent shall ensure that the topsoil should be protected and used in planting activities in the area.
29. The proponent shall ensure that the activities should not disturb the river flow, nor affect the Odai, Water bodies, Dams in the vicinity.
30. The proponent shall ensure that the activities should not disturb the vegetation and wildlife in the adjoin reserve forests and areas around.


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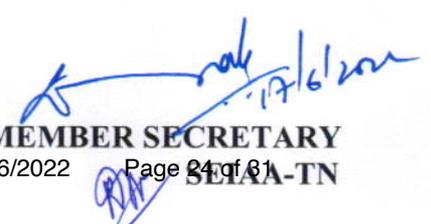
31. The proponent should ensure that there is no disturbance to the agriculture plantations, social forestry plantations, waste lands, forests, sanctuary or national parks. There should be no impact on the land, water, soil and biological environment and other natural resources due to the mining activities.
32. The proponent shall ensure that topsoil to be utilized for site restoration and Green belt alone within the proposed area.
33. The proponent shall ensure that activities should not impact greenlands/grazing fields of all types surrounding the mine lease area which are food source for the grazing cattles.

Part-A: Conditions to be Complied before commencing mining operations:-

1. **The project proponent shall advertise in at least two local newspapers widely circulated in the region, one of which shall be in the vernacular language informing the public that**
 - I. **The project has been accorded Environmental Clearance.**
 - II. **Copies of clearance letters are available with the Tamil Nadu Pollution Control Board.**
 - III. **Environmental Clearance may also be seen on the website of the SEIAA.**
 - IV. **The advertisement should be made within 7 days from the date of receipt of the clearance letter and a copy of the same shall be forwarded to the SEIAA.**
2. Mining activity should be reviewed by the District Collector after three years and decide for further extension.
3. NOC from the Standing committee of the NBWL shall be obtained, if protected areas are located within 10 Km from the proposed project site.
4. The project proponent shall comply the conditions laid down in the Section V, Rule 36 of Tamil Nadu Minor Minerals Concession Rules 1959.
5. **A copy of the Environment Clearance letter shall be sent by the proponent to the concerned Panchayat, Town Panchayat / Panchayat union/ Municipal Corporation, Urban Local Body and the Local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the proponent and also kept at the site, for the general public to see.**

MEMBER SECRETARY

6. Quarry lease area should be demarcated on the ground with wire fencing to show the boundary of the lease area on all sides with red flags on every pillar shall be erected before commencement of quarrying.
7. The proponent shall ensure that First Aid Box is available at site.
8. The excavation activity shall not alter the natural drainage pattern of the area.
9. The excavated pit shall be restored by the project proponent for useful purposes.
10. The proponent shall quarry and remove only in the permitted areas as per the approved Mining Plan details.
11. The quarrying operation shall be restricted between 7AM and 5 PM.
12. The proponent shall take necessary measures to ensure that there shall not be any adverse impacts due to quarrying operation on the nearby human habitations, by way of pollution to the environment.
13. A minimum distance of 50mts. from any civil structure shall be kept from the periphery of any excavation area.
14. Depth of quarrying should be as per approved mining plan.
15. The mined out pits should be backfilled where warranted and area should be suitably landscaped to prevent environmental degradation. The mine closure plan as furnished in the proposal shall be strictly followed with back filling and tree plantation.
16. Wet drilling method is to be adopted to control dust emissions. Delay detonators and shock tube initiation system for blasting shall be used so as to reduce vibration and dust.
17. Drilling and blasting shall be done only either by licensed explosive agent or by the proponent after obtaining required approvals from Competent Authorities.
18. Blasting shall be carried out after announcing to the public adequate through public address system to avoid any accident.
19. A study has to be conducted to assess the optimum blast parameters and blast design to keep the vibration limits less than prescribed levels and only such design and parameters should be implemented while blasting is done. Periodical monitoring of the vibration at specified location to be conducted and records kept for inspection.
20. The Proponent shall take appropriate measures to ensure that the GLC shall comply with the revised NAAQ norms notified by MoEF& CC, GoI on 16.11.2009.


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21. The following measures are to be implemented to reduce Air Pollution during transportation of mineral
- i. Roads shall be graded to mitigate the dust emission.
 - ii. Water shall be sprinkled at regular interval on the main road and other service roads to suppress dust
22. The following measures are to be implemented to reduce Noise Pollution
- i. Proper and regular maintenance of vehicles and other equipment
 - ii. Limiting time exposure of workers to excessive noise.
 - iii. The workers employed shall be provided with protection equipment and earmuffs etc.
 - iv. Speed of trucks entering or leaving the mine is to be limited to moderate speed of 25 kmph to prevent undue noise from empty trucks.
 - v. All noise generating machinery the compressor, generator to be enclosed in acoustic enclosure so as to reduce noise in working area.
23. Measures should be taken to comply with the provisions laid under Noise Pollution (Regulation and Control) (Amendment) Rules, 2010, dt: 11.01.2010 issued by the MoEF& CC, GoI to control noise to the prescribed levels.
24. Suitable conservation measures to augment groundwater resources in the area shall be planned and implemented in consultation with Regional Director, CGWB. Suitable measures should be taken for rainwater harvesting.
25. Permission from the competent authority should be obtained for drawl of ground water, if any, required for this project.
26. Topsoil, if any, shall be stacked properly with proper slope with adequate measures and should be used for plantation purpose.
27. The following measures are to be adopted to control erosion of dumps:-
- i. Retention/ toe walls shall be provided at the foot of the dumps.
 - ii. Worked out slopes are to be stabilized by planting appropriate shrub/ grass species on the slopes.
28. Waste oils, used oils generated from the EM machines, mining operations, if any, shall be disposed as per the Hazardous& other wastes (Management, and Trans Boundary Movement) Rules, 2016 and its amendments thereof to the recyclers authorized by TNPCB.


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29. Concealing the factual data or 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.
30. Rain water harvesting to collect and utilize the entire water falling in land area should be provided.
31. Rain water getting accumulated in the quarry floor shall not be discharged directly to the nearby stream or water body. If it is to be let into the nearby water body, it has to be discharged into a silt trap on the surface within the lease area and only the overflow after allowing settling of soil be let into the nearby waterways. The silt trap should be of sufficient dimensions to catch all the silt water being pumped out during one season. The silt trap should be cleaned of all the deposited silt at the end of the season and kept ready for taking care of the silt in the next season.
32. The lease holder shall undertake adequate safeguard measures during extraction of material and ensure that due to this activity, the hydro-geological regime of the surrounding area shall not be affected. Regular monitoring of ground water level and quality shall be carried out around the mine lease area during the mining operation. If at any stage, if it is observed that the groundwater table is getting depleted due to the mining activity; necessary corrective measures shall be carried out. District Collector/mining officer shall ensure this.
33. No tree-felling shall be done in the leased area, except only with the permission from competent Authority.
34. To take up environmental monitoring of the proposed quarry site before, during and after the mining activities including vibration study data, water, air & flora/fauna environment, slurry water generated/disposed and method of disposal, involving a reputed academic Institution.
35. It shall be ensured that the total extent of nearby quarries(existing, abandoned and proposed) located within 500 meter radius from the periphery of this quarry is not exceeding 5 hectares within the mining lease period of this application.
36. It shall be ensured that there is no habitation is located within 300 meter radius from the periphery of the quarry site and also ensure that no hindrance will be caused to the people of the habitation located within 300m radius from the periphery of the quarry site.


MEMBER SECRETARY
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37. Free Silica test should be conducted and reported to TNPCB, Department of Geology and Mining and Regional Director, MoEF& CC, GOI.
38. Air sampling at intersection point should be conducted and reported to TNPCB, Department of Geology and Mining and Regional Director, MoEF& CC, GOI.
39. Bunds to be provided at the boundary of the project site.
40. The project proponent shall undertake plantation/afforestation work by planting the native species on all side of the lease area at the rate of 400/Ha. Suitable tall tree saplings should be planted on the bunds and other suitable areas in and around the work place.
41. Floor of excavated pit to be levelled and sides to be sloped with gentle slope (Except for granite quarries) in the mine closure phase.
42. The Project Proponent shall ensure a minimum of 2.5% of the annual turnover will be utilized for the CSR Activity
43. The Project Proponent shall provide solar lighting system to the nearby villages.
44. Earthen bunds and barbed wire fencing around the pits with green belt all along the boundary shall be developed and maintained.
45. Safety equipments to be provided to all the employees.
46. Safety distance of 50m has to be provided in case of railway, reservoir, canal/odai
47. The Assistant/Deputy Director, Department of Geology & mining shall ensure that the proponent has engaged the blaster with valid Blasting license/certificate obtained from the competent authority before execution of mining lease.
48. The proponent shall furnish the Baseline data covering the Air, Water, Noise and land environment quality for the proposed quarry site before execution of mining lease.
49. The proponent shall erect the pillars in accordance with the Rules for depicting GPS details in the earmarked boundary of the quarry site to monitor electronically before execution of mining.
50. The proponent has to provide insurance protection to the workers in the case of existing mining or provide the affidavit in case of fresh lease before execution of mining lease.
51. The proponent has to display the name board at the quarry site showing the details of Proponent, lease period, extent, etc., with respect to the existing activity before execution of mining.


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52. Heavy earth machinery equipments if utilized, after getting approval from the competent authority.
53. The Proponent shall ensure that the project activity including blasting, mining transportation etc should in no way have adverse impact to the other forests, such as reserve forests and social forests, tree plantation and bio diversity, surrounding water bodies etc.
54. The proponent shall provide Green Belt development at the rate of not less than 400 trees/Hectare. The tree saplings shall be not less than 3m height.
55. The fugitive emissions should be monitored during the mining activity and should be reported to TNPCB once in a month and the operation of the quarry should no way impact the agriculture activity & water bodies near the project site.
56. All the commitment made by the project proponent in the proposal shall be strictly followed.
57. The mining lease holders shall, after ceasing mining operations, undertake re-grassing the mining area and any other area which may have been disturbed due to their mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc.
58. The Project proponent has to strictly comply the outcome/direction of the Hon'ble NGT, Principle Bench, New Delhi in the O.A No.186 of 2016 (M.A.No.350/2016), O.A. No.200/2016, O.A.No.580/2016 (M.A.No.1182/2016), O.A.No.102/2017, O.A.No.404/ 2016 (M.A.No.758/2016, M.A. No. 920 /2016, M.A.No.1122/2016, M.A.No.12/2017 & M.A.No.843/2017), O.A.No.405/2016 and O.A.No.520 of 2016 (M.A.No.981/2016, M.A.No.982/2016 & M.A.No.384/2017).

Part B: General Conditions:

1. EC is given only on the factual records, documents and the commitment furnished in non judicial stamp paper by the proponent.
2. The Proponent shall obtain the Consent from the TNPC Board before commencing the activity.
3. No change in mining technology and scope of working should be made without prior approval of the SEIAA, Tamil Nadu.
4. No change in the calendar plan including excavation, quantum of mineral (minor mineral) should be made.


MEMBER SECRETARY
SEIAA-TN

5. Effective safeguard measures, such as regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of particulate matter such as loading and unloading point and all transfer points. Extensive water sprinkling shall be carried out on haul roads. It should be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central Pollution Control Board in this regard.
6. Effective safeguards shall be adopted against health risks on account of breeding of vectors in the water bodies created due to excavation of earth.
7. A berm shall be left from the boundary of adjoining field having a width equal to at least half the depth of proposed excavation.
8. Loading and unloading areas including all the transfer points should also have efficient dust control arrangements. These should be properly maintained and operated.
9. Vehicular emissions shall be kept under control and be regularly monitored. The mineral transportation shall be carried out through the covered trucks only and the vehicles carrying the mineral shall not be overloaded.
10. Access and haul roads to the quarrying area should be restored in a mutually agreeable manner where these are considered unnecessary after extraction has been completed.
11. All Personnel shall be provided with protective respiratory devices including safety shoes, masks, gloves etc. Supervisory people should be provided with adequate training and information on safety and health aspects. Occupational health surveillance program of the workers should be undertaken periodically to observe any contractions due to exposure to dust and take corrective measures, if needed.
12. Periodical medical examination of the workers engaged in the project shall be carried out and records maintained. For the purpose, schedule of health examination of the workers should be drawn and followed accordingly. The workers shall be provided with personnel protective measures such as masks, gloves, boots etc.
13. Workers/labourers shall be provided with facilities for drinking water and sanitation facility for Female and Male separately.
14. The project proponent shall ensure that child labour is not employed in the project as per the sworn affidavit furnished.


MEMBER SECRETARY
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15. The funds earmarked for environmental protection measures should be kept in separate account and should not be diverted for other purpose. Year wise expenditure should be reported to the Ministry of Environment and Forests and its Regional Office located at Chennai.
16. The Environmental Clearance does not absolve the applicant/proponent of his obligation/requirement to obtain other statutory and administrative clearances from other statutory and administrative authorities.
17. This Environmental Clearance does not imply that the other statutory / administrative clearances shall be granted to the project by the concerned authorities. Such authorities would be considering the project on merits and be taking decisions independently of the Environmental Clearance
18. The SEIAA, Tamil Nadu may alter/modify the above conditions or stipulate any further conditions in the interest of environment protection.
19. The SEIAA, Tamil Nadu may cancel the Environmental Clearance granted to this project under the provisions of EIA Notification, 2006, at any stage of the validity of this Environmental Clearance, if it is found or if it comes to the knowledge of this SEIAA, TN that the project proponent has deliberately concealed and/or submitted false or misleading information or inadequate data for obtaining the Environmental Clearance.
20. Failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of the Environment (Protection) Act, 1986.
21. The above conditions will be enforced inter-alia, under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, the Public Liability Insurance Act, 1991, along with their amendments, Minor Mineral Conservation & Development Rules, 2010 framed under MMDR Act 1957, National Commission for protection of Child Right Rules, 2006, Wildlife Protection Act, 1972, Forest Conservation Act, 1980, Biodiversity Conservation Act, 2016, the Biological Diversity Act, 2002 and Biological diversity Rules, 2004 and Rules made there under and also any other orders passed by the Hon'ble Supreme Court of India/Hon'ble High Court of Madras and any other Courts of Law relating to the subject matter.


MEMBER SECRETARY
SEIAA-TN

22. Any other conditions stipulated by other Statutory/Government authorities shall be complied.
23. Any appeal against this Environmental Clearance shall lie with the Hon'ble National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.
24. The Environmental Clearance is issued based on the documents furnished by the project proponent. In case any documents found to be incorrect/not in order at a later date the Environmental Clearance issued to the project will be deemed to be revoked/ cancelled.


MEMBER SECRETARY
SEIAA-TN

Copy to:

1. The Secretary, Ministry of Mines, Government of India, Shastri Bhawan, New Delhi.
2. The Additional Chief Secretary to Government, Environment and Forests Department, Tamil Nadu.
3. The Additional Chief Secretary to Government, Industries Department, Tamil Nadu.
4. The Additional Principal Chief Conservator of Forests, Regional Office (SZ), 34, HEPC Building, 1st& 2nd Floor, Cathedral Garden Road, Nungambakkam, Chennai – 34.
5. The Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD-Cum-Office Complex, East Arjun Nagar, New Delhi-110 032.
6. The Chairman, TNPC Board, 76, Mount Salai, Guindy, Chennai-32
7. The District Collector, Tiruvallur District
8. The Commissioner of Geology and Mines, Guindy, Chennai-32
9. EI Division, Ministry of Environment & Forests, Paryavaran Bhawan, New Delhi.
10. File Copy

ENVIRONMENTAL
CLEARANCE

Government of India
Ministry of Environment, Forest and Climate Change
(Issued by the State Environment Impact Assessment
Authority(SEIAA), Kerala)

To,

The CEO
ADANI VIZHINJAM PORT PVT LTD
2nd Floor, Vipanchika Tower, Thycaud Thiruvananthapuram -695014

Subject: Grant of Environmental Clearance (EC) to the proposed Project Activity under the provision of EIA Notification 2006-regarding

Sir/Madam,

This is in reference to your application for Environmental Clearance (EC) in respect of project submitted to the SEIAA vide proposal number SIA/KL/MIN/58473/2019 dated 26 Mar 2021. The particulars of the environmental clearance granted to the project are as below.

- | | |
|--|---|
| 1. EC Identification No. | EC22B001KL194879 |
| 2. File No. | 1405/EC2/2019/SEIAA |
| 3. Project Type | New |
| 4. Category | B1 |
| 5. Project/Activity including Schedule No. | 1(a) Mining of minerals |
| 6. Name of Project | Proposed Building Stone Quarry in Re - Sy. Block No. 37, Re - Sy No. 554/1, 554/5 & 554/6 of Nagaroor village (Kadavilla), Chirayinkeezh Taluk, Thiruvananthapuram district of Kerala state |
| 7. Name of Company/Organization | ADANI VIZHINJAM PORT PVT LTD |
| 8. Location of Project | Kerala |
| 9. TOR Date | 22 Aug 2019 |

The project details along with terms and conditions are appended herewith from page no 2 onwards.

Date: 16/08/2022

(e-signed)
Dr. Venu V IAS
Member Secretary
SEIAA - (Kerala)

Note: A valid environmental clearance shall be one that has EC identification number & E-Sign generated from PARIVESH. Please quote identification number in all future correspondence.

This is a computer generated cover page.

PARIVESH

(Pro-Active and Responsive Facilitation by Interactive,
and Virtuous Environmental Single-Window Hub)



Chirayinkeezh Taluk, Thiruvananthapuram District, Kerala. The project details are as follows:

SL.No.	Particulars	Details
1	Name of the Project	Granite Building Stone Quarry Project of M/s Adani Vizhinjam Port Limited
2	Proposed Activity	Mining of Granite Building Stone
3	Name of the Sector & Schedule No. (in the EIA Notification, 2006)	Non Coal mining, Activity 1(a), Category B2
4	Name & Address of the Project Proponent	Sri. Rajesh Kumar Jha, CEO – Authorized signatory, M/s Adani Vizhinjam Port Pvt Ltd. (AVPPL), 2 nd Floor, Vipanchika Tower, Thycaud, Thiruvananthapuram – 695014
5	Project Location	
	a) Block. No	37
	Re-Survey Nos:	554/1, 554/5 & 554/6, Government (Poraomboke) land
	b) Village	Nagaroor Village (Kadavilla)
	c) Taluk	Chirayinkeezhu
	d) District	Thiruvananthapuram
6	Geo Co-ordinates	Latitude 08°43' 41.70" N to 08°43' 51.74" N Longitude 76°50' 21.24" E to 76° 50' 27.59" E
7	Extent (in Hectare)	2.4706
8	Project Cost	Rs.300 Lakhs
9	Production Capacity	2,30,000 TPA

10	Water Requirement Source	25 KLD (0.5 KLD for domestic, 1.0 KLD for plantation & 23.5 KLD for dust suppression) Open well & Quarry pit
11	Date of Field Inspection	07.05.2022

CER Details

Sl.No.	Activity	Initial cost (Lakh Rs.)	Recurring expenses proposed/annum (Lakh Rs.)
Environmental Monitoring			
1	Environmental monitoring (Air, water, Noise, soil and etc.)	-	3.50
Pollution control measures			
2	Air Pollution Control Measures (4 trip/day * 200 days* Rs.700/trip	-	5.60
3	Plantation	2.00	1.00
4	Water Pollution Control Measures such as gully checks, rubble walls, garland drains within the quarry, etc.	6.00	2.00
5	Preventive and corrective maintenance of plant and machinery to reduce noise pollution and consumption of non- renewable resources (2.5% of the plant & machinery cost).	-	1.50
6	Occupational Health & Safety (provision of first aid room, shelter, providing PPEs)	3.00	2.50
Sub- Total		11.00	16.10
CER Activities related to Concerns raised during the Public Consultation in physical terms			
7	Considering a requirement form the Local People during the Public Hearing, CER activity with respect to cost towards water supply to	-	5.00

	Thannikonam and Kadavilla will be taken up.		
8	Considering a requirement from the Local People during the Public hearing, CER activity with respect to cost towards Maintenance of Roads: From Thannikonam Village to Kadavilla Junction and other nearby roads will be taken up.	-	8.00
9	Special Medical Checkup and general checkup camps in nearby villages: Nagaroor, Kadavilla, Vanchiyoor will be taken up	-	2.00
Sub- Total		-	15.00
Total		Rs. 11.00 Lakhs	Rs. 31.10 lakhs

2. In the 128th SEAC meeting held on 23rd to 24th May, 2022, the Committee examined the documents submitted by the proponent and found them satisfactory. The nearest built structure is at a distance of 55.3m. The Committee discussed the field inspection report and recommended for EC for a period of 5 years subject to the following Specific Conditions in addition to the General Conditions

- a. The proponent should upload the District Survey Report, Form 1M and Annexures of the Mine Plan, produced during the field inspection, prior to issuance of the EC.
- b. Garland drain should be provided covering the entire project area along with intermittent silt traps and siltation pond of appropriate volume and outflow channel. The entire drain should be desilted periodically for preventing any obstruction to the drainage system.
- c. Blasting (NONEL) should be done only with drill hole of 32mm diameter and depth 1.5m loaded with a maximum of 375 gm of explosive in each hole of the array with a burden of 1.5m and spacing of 1m. An affidavit to this should be submitted by the Proponent.
- d. If the proponent desires to adopt blasting (NONEL) using drill hole of diameter 115mm and depth 6.5m with burden ranging from 2.00 to 2.50 m and spacing of 2.50 to 3.00 m loaded with higher quantity of explosives to the tune of about 20 – 25 kgs of explosives, as proposed in the Mine Plan, special permission from the SEIAA

should be obtained after conducting a vibration impact study on various built structures within 200m from the project boundary by engaging a National Institute such as National Institute of Rock Mechanics and inference thereupon.

- e. Impact of vibration due to blasting on the nearest houses and built structures should be monitored in terms of Peak Particle Velocity and amplitude for a maximum charge per delay and included in the Half Yearly Compliance Report.
- f. Retaining wall of appropriate height should be provided at the overburden dumping site
- g. CER Plan should be implemented within the first 18 months and it should be operated and maintained till the mine closure plan is implemented
- h. Planting of trees for the development of green belt should be done prior to the commencement of mining and green belt should be nurtured and maintained during the entire project period
- i. Temporary wall should be provided wherever green belt cannot be developed due to the presence of barren rock
- j. Temporary wall should be provided at the boundary adjacent to the Temple and Thrisoolam structure
- k. Compensatory afforestation should be initiated before the commencement of mining in available land as tree planting is not feasible along some portion of the buffer zone
- l. Transportation of mined material should not be done during the peak hours in the forenoon (8.30am to 10.30am) and afternoon (3.30pm to 5 pm).
- m. Adequate number of toilets and waste management facility should be provided at the site
- n. Haulage road should be maintained well with frequent sprinkling
- o. The proponent should submit an affidavit stating that all the assurances given during the Public Consultation process will be complied with including the drinking water.

3. In the 115th SEIAA meeting held on 30th June, 2022, the Authority decided to issue Environmental Clearance for the project life of 5 years for the quantity mentioned in the approved Mining Plan after the Project Proponent uploads the District Survey Report, Form 1M and Annexures of the Mine Plan, produced during the field inspection and submission of all necessary documents and affidavits as instructed by SEAC in its 128th meeting to the

satisfaction of SEIAA. The EC is subject to the following Specific Conditions in addition to the General Conditions.

1. *The proponent shall carry out quarrying as per the approved Mining Plan and the proponent should strictly follow the Kerala Minor Mineral Concession Rules 2015 and amendments thereby.*
2. *The EC shall be valid from the date of execution of permit/lease from the Department of Mining and Geology. The copy of the lease order should be provided to the SEIAA before commencing the mining activity.*
3. *Simultaneous blasting in Kadavila I and Kadavila II quarries must be avoided and time schedule must be adopted for blasting.*
4. *Garland drain should be provided covering the entire project area along with intermittent silt traps and siltation pond of appropriate volume and outflow channel. The entire drain should be desilted periodically for preventing any obstruction to the drainage system.*
5. *The proponent should adhere to the affidavit regarding the drilling and blasting parameters that Blasting (NONEL) will be done only with drill hole of 32mm diameter and depth 1.5m loaded with a maximum of 375 gm of explosive in each hole of the array with a burden of 1.5m and spacing of 1m.*
6. *A vibration impact study on various built structures within 200m from the project boundary shall be conducted by engaging a National Institute such as National Institute of Rock Mechanics and their recommendations must be implemented. A copy of the study report should be made available to Dept. of Mining and Geology for their record and future reference.*
7. *Impact of vibration due to blasting on the nearest houses and built structures should be monitored in terms of Peak Particle Velocity and amplitude for a maximum charge per delay and included in the Half Yearly Compliance Report.*
8. *Retaining wall of appropriate height should be provided at the overburden dumping site*

9. *CER Plan should be implemented within the first 18 months and it should be operated and maintained till the mine closure plan is implemented*
10. *Planting of trees for the development of green belt should be done prior to the commencement of mining and green belt should be nurtured and maintained during the entire project period*
11. *Temporary wall should be provided wherever green belt cannot be developed due to the presence of barren rock*
12. *Temporary wall should be provided at the boundary adjacent to the Temple and Thrisoolam structure*
13. *Compensatory afforestation should be initiated before the commencement of mining in available land as tree planting is not feasible along some portion of the buffer zone*
14. *Transportation of mined material should not be done during the peak hours in the forenoon (8.30am to 10.30am) and afternoon (3.30pm to 5 pm).*
15. *Mining activities including loading of mined materials should not be carried out between sun set and sunrise.*
16. *Adequate number of toilets and waste management facility should be provided at the site*
17. *Haulage road should be maintained well with frequent sprinkling*
18. *The proponent should adhere to the affidavit stating that all the assurances given during the Public Consultation process will be complied with including the drinking water supply.*
19. *As per OM no F.No.22-65/2017-IA.III dated 30th September 2020, under Corporate Environmental Responsibility (CER) the project Proponent shall prepare an Environment Management Plan (EMP) as directed by SEAC during appraisal, covering the issues to address the environmental problems in the project region, indicating both physical and financial targets year wise. The EMP shall be implemented in consultation with local self Govt. Institutions. The indicated cost for CER shall be 2% of the project cost depending upon the nature of activities proposed. The follow up action on implementation of CER shall be included in the Half Yearly Compliance Report which will be subjected to field inspection at regular*

intervals. A copy of the approved EMP shall be made available to the concerned Panchayat for information and implementation support.

- 20. In the wake of occurrence of large scale landslides in the state, as per the information provided by the Department of Mining & Geology, it is directed to use only NONEL (Non Electrical) technology for blasting to reduce the vibration of the ground, which is one of the causative factors that triggers landslides, formation of cracks in the surrounding buildings and disturbance to human and wildlife.*
- 21. As per the directions contained in the OM F.No.22-34/2018-IA.III dated 16th January 2020 issued by MoEF&CC, in obedience to the directions of the Hon'ble Supreme Court the Project Proponent shall, undertake re-grassing the mining area and any other area which may have been disturbed due to his mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc. The compliance of this direction shall be included in the Half Yearly Compliance Report which will be monitored by SEAC at regular intervals.*
- 22. The violation of EC condition may lead to cancellation of EC and action under The Environment (Protection) Act 1986.*

4. The proponent submitted the affidavit and other required documents as instructed by SEIAA.

5. **Environmental Clearance as per the EIA Notification, 2006 is hereby accorded for the Granite Building Stone Quarry Project of Sri. Rajesh Kumar Jha, CEO – Authorized signatory, M/s Adani Vizhinjam Port Pvt Ltd. (AVPPL), 2nd Floor, Vipanchika Tower, Thycaud, Thiruvananthapuram – 695014, for an area of 2.4706 Ha, in Block No. 37, Re. Sy No. 554/1, 554/5 & 554/6 of Government (Poramboke) land in Nagaroor Village (Kadavilla), Chirayinkeezh Taluk, Thiruvananthapuram District, Kerala, for the Project Life of 5 years for the quantity mentioned in the approved Mining Plan from the date of execution of valid permit / lease from the Mining & Geology Department, subject to the Specific Conditions in Para 3 above, and all the environmental impact mitigation and management measures undertaken by the Project Proponent in the Form I, EMP, PFR and Mining plan submitted to SEIAA. The assurances**

and clarifications given by the proponent will be deemed to be a part of this Proceedings as if incorporated herein. Also the General Conditions for projects stipulated for mining (items 1 to 57), mentioned below will be applicable and have to be strictly adhered to.

6. The Environmental Clearance issued will also be subject to full and effective implementation of all the undertakings given in the Application Form, mitigation measures as assured in the Environment Management Plan and the mining features including Progressive Mine Closure Plan as submitted with the application. The above undertakings and the conditions and the undertakings in (Mining), (Blasting), (Mines Drainage), (Stacking of Mineral rejects and Disposal of waste), (Environment Management Plan) & (Progressive Mine Closure Plan) of the Mining Plan as submitted will be deemed to be part of this Proceedings as conditions as undertaken by the proponent, as if incorporated herein.

7. Validity of the Environmental Clearance will be for a period of **Five (5) years** from the date of execution of valid mine lease/permit from Mining & Geology Department as per SO 1807(E) dated 12.04.2022 of MoEF & CC, subject to earlier review of EC in case of violation or non-compliance of conditions or genuine complaints from residents within the security area of the quarry.

8. Compliance of the conditions herein will be monitored by the State Environment Impact Assessment Authority or its authorised offices and also by the Regional Office of the Ministry of Environment, Forest & Climate Change, Govt. of India, Bangalore. Necessary assistance for entry and inspection should be provided by the Project Proponent and those who are engaged or entrusted by him to the staff for inspection or monitoring. Instances of violation if any shall be reported to the District Collector, Thiruvananthapuram

9. The Half Yearly Compliance Report (HYCRs) with its contents, covering letter, compliance report and environmental monitoring data have to be uploaded in the PARIVESH portal and the website of the Project Proponent. The HYCR with the name of the project, EC No and date & the period of submission should be sent to the Regional Office of MoEF & CC & to SEIAA by email only at email ID rosz.bng-mefcc@gov.in & seaceiaakerala@gmail.com, respectively. Hardcopy of HYCRs shall not be acceptable.

10. The given address for correspondence with the authorised signatory of the project is Sri. Rajesh Kumar Jha, CEO – Authorized signatory, M/s Adani Vizhinjam Port Pvt Ltd. (AVPPL), 2nd Floor, Vipanchika Tower, Thycaud, Thiruvananthapuram – 695014.

GENERAL CONDITIONS

1. The proponent should provide notarized affidavit (indicating the number and date of Environmental Clearance proceedings) that all the conditions stipulated in the EC shall be scrupulously followed.
2. All the statutory clearances should be obtained, as applicable, by the project proponent from the respective competent authorities including that for blasting and storage of explosives. Copies of all statutory clearances shall be submitted along with First Half Yearly Compliance Report.
3. The project proponent should advertise in news papers that the project has been accorded Environmental Clearance and copies of clearance letters are available in the Office of State Environment Impact Assessment Authority (SEIAA) and on the website of the Authority at www.seiaakerala.in. The advertisement should be in at least two local newspapers widely circulated in the region, one of which shall be in the vernacular language. The advertisement should be made within 10 days from the date of receipt of the Environmental Clearance letter and a copy of the same signed in all pages should be forwarded to the office of this Authority as confirmation.
4. The proponent shall send a copy of the EC to concerned Grama Panchayat/ District Panchayat/ Municipality/Corporation/Urban Local Body and also to the Local NGO, if any, from whom suggestions/representations, if any, were received while processing the proposal. The Environmental Clearance shall also be uploaded on the website of the company.
5. The lease area shall be fenced with barbed wire to a minimum height of 4ft around, before starting mining. All the boundary indicators (boards, markings, etc) shall be conspicuous and maintained at all times.
6. The details of Environmental Clearance should be prominently displayed in a metallic board of 3 ft x 3 ft with green background and yellow letters of

Times New Roman font 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.

7. Explosives should be stored in magazines in isolated place specified and approved by the Explosives Department. Mats to reduce fly rock blasts to a maximum of 10 PPV should be provided.
8. Warning alarms indicating the time of blasting (to be done at specific timings) has to be arranged stipulated by Explosive Department.
9. Access roads to the quarry shall be black topped to contain dust emissions that may arise during transportation of materials. The transportation of minerals should be done in covered trucks to contain dust emissions.
10. A separate Environmental Management Cell (EMC) with suitable qualified personnel should be set-up under the chairmanship of a Senior Executive, who will report directly to the Head of the Organization. The Cell should have representative of Biodiversity Management Committee of the Panchayath and a representative of NGO, if any active in the area. The EMC should meet at least once in six months and review the activities and minutes should be a part of the compliance report.
11. Quarrying has to be carried out as per approved mining plan with the suggestions from SEAC incorporated and following KMMC rules 2015 and the Amendments thereby.
12. The quarrying operation shall be restricted between 7 AM and 5PM
13. Rain Water Harvesting facility should be installed as per the prevailing provisions of KMBR/KPBR, unless otherwise specified. Maximum possible solar energy generation and utilization shall be ensured as an essential part of the project.
14. Maximum depth of mining shall be as per the mining plan and as per specific direction of SEAC after field inspection. The maximum depth of mining should not be deeper than the local ground water table. No mining operations should be carried out at places having a slope greater than 45°.
15. The height of any bench shall not exceed five meters and breadth shall not be less than the height.

16. The Project proponent shall ensure that no perennial or intermittent natural water course and/or water resources are 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.
17. A minimum buffer distance specified as per existing rules and statutory orders shall be maintained from the boundary of the quarry to the nearest dwelling unit or other structures, and from forest boundaries or any other ecologically sensitive and archeologically important areas or the specific distance specified by SEIAA in EC as per the recommendations of SEAC depending on specific local conditions.
18. The proponent should plant seedlings at least 5 times of the loss of trees that has occurred while clearing the land for the project and follow planting measures as suggested by SEAC. Suitable avenue trees should be planted along the sides of the approach road and internal roads and open parking areas, if any. Preference should be given to endemic native and fruit bearing species. Planting in buffer areas should be taken up beforehand. Proper upkeep and maintenance of planted seedlings shall be ensured by the project proponent.
19. The proponent should ensure that the vegetation in the buffer is retained, maintained and strengthened with additions of native broad leaved plants.
20. Eco-restoration including the closure of mine as per the progressive closure plan and final closure plan shall be done at the cost of the project proponent. This eco-restoration should follow scientific standards available for restoration, full recovery of the original vegetation and improving the resilience of different ecosystems. Overburden materials should be managed within the site and used for reclamation of mined pit as per mine closure plan / specific conditions.
21. At least 10 percent out of the total excavated pit area should be retained as water storage areas and the remaining area should be reclaimed with stacked dumping and overburden and planted with suitable indigenous plant species, if no other specific condition on reclamation of pit is stipulated in the E.C. Monitoring and management of rehabilitated areas should continue until the

- vegetation becomes self-sustaining.
22. Control measures on noise and vibration prescribed by KSPCB should be implemented. Quarrying activities should be limited to day time as per KSPCB guidelines/specific conditions.
 23. Periodical monitoring of the vibration at specified location (preferably at a distance of 50 m and 100 m) to be conducted and records kept for inspection. This could also form a part of the compliance reports.
 24. Speed of trucks entering or leaving the mine site is to be limited to moderate speed of 25 kmph to prevent undue noise from empty trucks.
 25. Acoustic enclosures should be provided to reduce sound amplifications in addition to the provisions of green belt and hollow brick envelop for crushers so that the noise level is kept within prescribed standard limit indicated by CPCB/KSPCB.
 26. Blasting should be done in a controlled manner using NONEL technique as specified by the regulations of Petroleum and explosive safety organization (GOI) or any other concerned authorized agency. A licensed person should supervise/ control the blasting operations.
 27. Measures should be taken for maintaining noise levels below 85 dBA in the work environment.
 28. Project proponent should obtain necessary prior permission of the competent authorities for drawing requisite quantity of surface water and ground water for the project.
 29. Regular monitoring of flow rates and water quality upstream and downstream of the springs and perennial nallahs flowing in and around the mine lease area shall be carried out and reported in the six monthly compliance reports to SEIAA.
 30. 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, and for green belt development etc. The drains shall be regularly desilted and maintained properly, particularly after monsoon.

31. Regular monitoring of ground water level and quality shall be carried out around the mine area during mining operation. If any stage ,if it is observed that ground water table is getting depleted due to the mining activity; necessary corrective measures shall be carried out.
32. Garland drains and silt traps are to be provided in the slopes around the core area to channelize storm water. De-silting of Garland canal and silt traps have to be attended on a daily basis. A labour has to be specifically assigned for the purpose. The proponent shall ensure the quality of the discharging storm water as per the General Effluent Discharge Standards of CPCB.
33. In the case of any change(s) in the scope of the project, extent, quantity, process of mining technology involved or in any way affecting the environmental parameters/impacts as assessed, based on which the E.C was issued, the project would require a fresh appraisal by this Authority, for which the proponent shall apply and get the approval of this Authority. In the case of transfer of ECs, the matter shall be intimated and get the approval from the Authority as per the existing norms.
34. The stipulations by Statutory Authorities under different Acts and Notifications should be complied with, including the provisions of Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and control of Pollution) Act 1981, the Environment (Protection) Act, 1986, the Public Liability (Insurance) Act, 1991 and EIA Notification, 2006.
35. The top soil, if any, shall be temporarily stored at earmarked place (s) and used for land reclamation and plantation. The over burden (OB) generated during the mining operations shall be stacked at earmarked dump site(s) only. The maximum height of the dumps shall not exceed 8m and width 20m and overall slope of the dumps shall be maintained at 45⁰. The OB dumps should be scientifically vegetated with suitable native species to prevent erosion and surface run off. At critical points, use of geo textile shall be undertaken for stabilization of the dump. Protective wall or gabions should be made around the dump to prevent erosion / flow of sediments during rains. The entire excavated area shall be backfilled.
36. All the mining equipment used in Mining like backhoe loaders and

excavators cause pollution and hence shall be serviced regularly & maintained for their efficient functioning and for reducing pollution. Disposal of spent oil from diesel engines should be as specified under relevant Rules/ Regulations.

37. All vehicles used for transportation and within the mines shall have 'PUC' certificate from authorized pollution checking centre. Washing of all vehicles shall be inside the lease area. .
38. Effective safeguard measures such as regular water sprinkling shall be carried out in critical areas prone to air pollution such as haul road, loading and unloading points and transfer points and having high levels of PM₁₀ and PM_{2.5}. 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.
39. Fugitive dust emissions from all the sources should be controlled regularly. Water spraying arrangement at project site, parking area, on haul roads, loading and unloading and at transport points should be provided and properly maintained.
40. Corporate Environmental Responsibilities (CER) as prescribed by SEIAA/SEAC should be carried out leading to Environmental stability of the Project region. The activities carried out under CER should be a part of the half yearly compliance report. The certificates from the beneficiaries, if the CER part is completed should also be submitted to the State Environment Impact Assessment Authority (SEIAA) along with year wise expenditure .
41. The project proponent is responsible for implementing all the provisions of labour laws applicable from time to time to quarrying /Mining operations. The workers on the site should be provided with on-site accommodation or facilities at a suitable boarding place, protective equipment such as ear muffs, helmet, etc.
42. The proponent has to provide insurance protection to the workers in the case of existing mining or provide the affidavit in case of fresh lease before execution of mining lease.
43. Occupational health surveillance program of the workers should be

61

undertaken periodically to observe any contractions due to exposure to dust and take corrective measures, if needed. The report of health surveillance programme should be included in the half yearly compliance reports.

44. The pits in the abandoned quarries and in the mined area shall be used for activities like water harvesting, aqua culture etc. in an eco friendly manner.
45. If Government land is partly or fully used for mining, the area shall be returned at the end of lease period after mine closure with separate demarcation with suitable survey marks.
46. Any accident occurring in the mined out area after the lease period due to negligence in carrying out safety measures and non-closure , will lead to suspension of all EC obtained for mining by the Proponent.
47. In case of transfer of EC the matter shall be intimated and approval from the Authority shall be obtained as per the existing norms.
48. The proponent shall submit Half Yearly Compliance Reports (1st of June & 1st of December) 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 be simultaneously sent to the respective Regional Office of Ministry of Environment, Forests and Climate Change, Govt. of India and also to the Office of State Environment Impact Assessment Authority (SEIAA). The proponent has to submit Environmental statement in form V of Environment (Protection) Rules 1986 to SPCB on 31st March every year.
49. The project authorities should extend full cooperation to the officer (s) from the Regional Office of MOEF & CC located at Bangalore/SEAC/SPCB/CPCB/dept of Mining and Geology, while monitoring compliance of the stipulated conditions, by furnishing the requisite data/information/monitoring reports.
50. The above conditions shall prevail notwithstanding anything to the contrary, in consistent, or simplified, contained in any other permit, license on consent given by any other authority for the same project.

51. The Authority reserves the right to add additional safeguard measures subsequently, if found necessary, and to take action including revoking of the Environment Clearance under the provisions of the Environment (Protection) Act, 1986, to ensure effective implementation of the suggested safeguard measures in a time bound and satisfactory manner.
52. The EC given will be withdrawn at any time if the area is declared high hazardous by the SDMA.
53. The Environmental Clearance will be subject to the final order of the courts on any pending litigation related to the land or project, in any court of law.
54. Any appeal against this Environmental Clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.
55. Concealing the factual data or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of Environment (Protection) Act, 1986.
56. The SEIAA may revoke or suspend the order, for non implementation of any of the specific or any of the above conditions. The SEIAA reserves the right to alter/modify the above conditions or stipulate any further condition in the interest of environmental protection.
57. As per regulation no. 106(2) of metalliferous mines regulation under Mine act, the height of any bench shall not exceed six meters and breadth shall not be less than the height.

Sd/-

**Administrator, SEIAA
For Member Secretary, SEIAA**

To,

Sri. Rajesh Kumar Jha,
CEO – Authorized signatory,
M/s Adani Vizhinjam Port Pvt Ltd. (AVPPL),
2nd Floor, Vipanchika Tower,
Thycaud, Thiruvananthapuram - 695014

Copy to,

1. MoEF Regional Office, Southern Zone, Kendriya Sadan, 4th Floor, E&F Wing, II Block, Koramangala, Bangalore-560034.(through e-mail: rosz.bng-mefcc@gov.in)
2. The Additional Chief Secretary to Government, Environment Department, Government of Kerala
3. The Director, Directorate of Environment & Climate Change, 4th Floor KSRTC Bus Terminal, Thampanoor, Thiruvananthapuram, Kerala 695001.
4. The District Collector, Thiruvananthapuram
5. The Director, Mining & Geology, Thiruvananthapuram -4.
6. The Member Secretary, Kerala State Pollution Control Board
7. The District Geologist, Thiruvananthapuram
8. The Tahsildhar, Chirayinkeezh Taluk, Thiruvananthapuram District
9. The Secretary, Nagaroor Panchayath, Thiruvananthapuram
10. The Chairman, SEIAA.
11. Website.
12. S/f
13. O/c