

DRAFT EIA / EMP FOR PROPOSED ROUGH STONE AND GRAVEL QUARRY CATEGORY B1 - CLUSTER (CLUSTER AREA – 15.50.5 Ha.)

(Submitted for Public Hearing as per the provisions of EIA Notification 2006 & its amendments thereof)

APPROVED TOR vide TO25B0108TN5689908N, Dated: 25.07.2025 (File No – 12333)

PROPOSED QUARRY LEASE DETAILS	
SURVEY NOS	623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F
VILLAGE	GOPALAPURAM
TALUK	VENBAKOTTAI
DISTRICT	VIRUDHUNAGAR
EXTENT	1.90.50 HA
PROPOSED PRODUCTION FOR TEN YEARS	2,44,440 M3 OF ROUGH STONE (207960 M3 FOR FIRST FIVE YEARS AND 36480 M3 FOR NEXT FIVE YEARS) AND 72,930 M3 OF GRAVEL
ANNUAL PEAK PRODUCTION	42,400 m³ OF ROUGH STONE IN THE 5th YEAR AND 19,380 m³ OF GRAVEL IN THE 1st YEAR
LAND	PATTA LAND

(Sector No. 1(a) (Sector no.1 as per NABET)

Category of the Project: B1 Cluster Mining, Total Cluster Area – 15.50.5 Ha

Baseline Monitoring Period – March to May 2025

APPLICANT

**THIRU. B. KABILDEV S/o. BASKARAN,
NO.125/2, TEACHERS COLONY, K.R NAGAR (POST), PUTHUPALAYAM,
RAJAPALAYAM TALUK, VIRUDHUNAGAR DISTRICT- 626 108.**

ENVIRONMENTAL CONSULTANT	LABORATORY
M/s. GLOBAL MINING SOLUTIONS (NABET Accredited & ISO 9001 Certified Consultant) Plot No. 6, S.F.No. 13/2, A2, VS City, RC Chettypatty, Kottamettupatty, Omalur, Salem, Tamil Nadu – 636 455. NABET Accreditation No: NABET/EIA/23-26/SA 0241, Valid Until - January 4, 2026 Contact: 97502 23535 & 94446 54520 Email: infoglobalmining@gmail.com, globalminingsolutionssalem@gmail.com	M/s. SHRIENT ANALYTICAL & RESEARCH LABS PRIVATE LIMITED (NABL Accredited Testing Laboratory) Valid Until -29.09.2025 #416/15, Dhargas Road, Perungalathur, West Tambaram, Chennai, Tamil Nadu, India.

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

AMENDMENT PAGE

SL	Page No.	Section / Clause / Para / Line (as Applicable)	Date of Amendment	Amendment Made	Reasons of amendment	Signature of Person Authorizing Amendment
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						

ACKNOWLEDGEMENT

M/s. Global Mining Solutions, Salem is very much thankful to Thiru. B. Kabildev S/o. Baskaran for the confidence and trust placed on our organization for carrying out Environmental Impact Assessment (EIA) study for the proposed Rough Stone & Gravel Quarry over a lease extent of 1.90.50 Ha and cluster area of 15.50.5 Ha at Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu and formulating the Environmental Management Plan (EMP). We also gratefully acknowledge the cooperation and assistance provided by concerned government authorities for collection of secondary information for the preparation of EIA/EMP report. Our sincere thanks to the local people Gopalapuram Village and the nearby villages for their whole hearted cooperation and constant involvement during the entire field study without which the study would not have been possible.

For: M/s. Global Mining Solutions



(M.Prabhu)

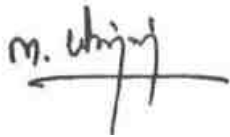
Managing Director

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

UNDERTAKING

In Line with MoEFCC OM no. J – 11013/41/2006-IA.II (I) dated 5th October 2011, we hereby give our undertaking for owning the content and information in the EIA/EMP report submitted for EC of the proposed Rough Stone & Gravel Quarry over a lease extent of 1.90.50 Ha and cluster area of 15.50.5 Ha at Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu.

For M/s. Global Mining Solutions



Name: Manikandan Manickam

EIA Coordinator – Mining of Minerals

Global Mining Solutions

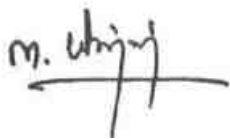
DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

UNDERTAKING

In Line with MOEF OM no. J-11013/41/2006-IA.II (1) dated 4th Aug 2009 and its Amendments, we hereby confirm that all Terms of Reference issued by Ministry of Environment, Forest and Climate Change vide TOR Identification No. TO25B0108TN5689908N, Dated: 25.07.2025 for preparation of EIA/EMP report for the proposed Rough Stone & Gravel Quarry over a lease extent of 1.90.50 Ha and cluster area of 15.50.5 Ha at Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu, for the production of 2,44,440 m³ of rough stone & 72,930 m³ of gravel from the proposed lease area and the details has been complied in the EIA/EMP report is factually correct.

The EIA/EMP report has been prepared by M/s. Global Mining Solutions (GMS), Salem. GMS is a NABET accredited consultant for preparation of EIA/EMP report of Mining of Minerals (Opencast only) vide certificate No. NABET/EIA/23-26/SA 0241 valid till 04.01.2026.

For M/s. Global Mining Solutions



Name: Manikandan Manickam

EIA Coordinator – Mining of Minerals

Global Mining Solutions

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE



भारतीय गुणवत्ता परिषद्
QUALITY COUNCIL
OF INDIA
Creating an Ecosystem for Quality



NABET

National Accreditation Board for Education and Training

Certificate of Accreditation

Global Mining Solutions

Plot No - 6 SF No 13/2 A2, VS City, RC Chettyapatty, Kottamettupatty, Omalur,
Salem, Tamil Nadu-636455

*The organization is accredited as **Category-A** under the QCI-NABET Scheme for Accreditation of EIA Consultant Organization, Version 3: for preparing EIA/EMP reports in the following Sectors-*

S. No	Sector Description	Sector (as per)		Cat.
		NABET	MoEFCC	
1	Mining of minerals including opencast/ underground mining	1	1 (a) (i)	A
3	Thermal power plants	4	1 (d)	B
5	Metallurgical industries (ferrous)	8	3 (a)	A
6	Cement Plants	9	3 (b)	A
26	Building and construction projects	38	8 (a)	B
27	Townships and Area development projects	39	8 (b)	B

Note: Names of approved EIA Coordinators and Functional Area Experts are mentioned in SAAC minutes dated May 20, 2025, posted on QCI-NABET website.

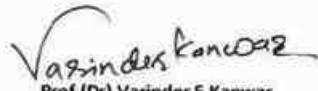
The Accreditation shall remain in force subject to continued compliance to the terms and conditions mentioned in QCI-NABET's letter of accreditation bearing no. QCI/NABET/ENV/ACO/25/3638 dated May 30, 2025. The accreditation needs to be renewed before the expiry date Eco Chem Sales and Services, Surut following due process of assessment.

Valid up to
January 4, 2026



Certificate No.
NABET/EIA/23-26/SA 0241

Issue Date
May 30, 2025



Prof (Dr) Varinder S Kanwar
CEO - NABET

For the updated List of Accredited EIA Consultant Organizations with approved Sectors please refer to QCI-NABET website.

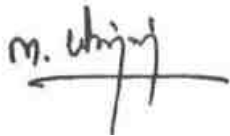
DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

DECLARATION BY EXPERTS

Declaration by Experts contributing to the proposed Rough Stone & Gravel Quarry over a lease extent of 1.90.50 Ha and cluster area of 15.50.5 Ha at Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu.

I, hereby, certify that I was a part of the EIA team that developed the above EIA.

EIA Coordinator Name: Manikandan Manickam



Signature & Date

Period of involvement: March to May 2025.

Contact information:

M/s Global Mining Solutions

Plot No.6, SF No. 13/2, A2, VS City, RC Chettypatty,

Kottamettupatty, Omalur,

Salem, Tamil Nadu – 636 455

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

S. No.	Functional areas	Name of the expert/s	Involvement (period and task**)	Signature and Date
1	AP	Dhanalakshmi Ramanathan	Assessment of existing air quality, Impact of the project on ambient air and suggested mitigation measures for air pollution. <u>Period: March to May 2025.</u>	R. Dhananjay
2	WP	Abirami Kaliaperumal	Assessment of existing water quality, impact of the project on surface and ground water quality, suggested mitigation measures for minimizing the impact. <u>Period: March to May 2025.</u>	K. Abirami
3	SHW	Ramadoss N	Assessment of waste generated from the project, suggested waste management practices. <u>Period: March to May 2025</u>	C. Ramadoss

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

4	SE	Sarasvathy K	Baseline SE study. Data compilation and assessment. Impact of the project on SE status of the area. Formulation of CER plan. <u>Period: March to May 2025</u>	
5	EB	Saravanan S	Baseline data collection of related to ecology of the area. <u>Period: March to May 2025</u>	
6	HG	Ravinthiran N	Hydrogeological feature of the area. Ground water depth and impact of project on ground water of the area. <u>Period: March to May 2025</u>	
7	AQ	Srilatha Thiruveedhula	Air quality modeling utilizing the area source model. Predication of the ground level concentration of the dust. Suggesting suitable mitigation measures. <u>Period: March to May 2025</u>	
8	NV	Dhanalakshmi Ramanathan	Ambient noise study of the area. Incremental noise generation due to quarry operation and	

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

			<i>impact of the noise due to the project.</i> <u>Period: March to May 2025</u>	
9	LU	Srilatha Thiruveedhula	<i>Preparation of land use map based on satellite imagery. Land use classification and analysis. Impact prediction of the project on the surrounding land environment.</i> <u>Period: March to May 2025</u>	T. Srilatha
10	RH	S.V. Prashant	<i>Identification of the Risk related to the mining activities. Preparation of emergency disaster management plan. Plan for supply of safety equipment for the worker.</i> <u>Period: March to May 2025</u>	S. Prashant
11	SC	Shisupal Sing	<i>Soil monitoring, secondary data collection on soil type, soil management practices, utilization of topsoil.</i> <u>Period: March to May 2025</u>	Shisupal Sing
12	GEO	Valliappan Meyyappan	<i>Geological map, stability of quarry and dump, management plan for</i>	

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

			<i>mine stability, after use of mining quarry and geological feature of the area.</i> <i><u>Period: March to May 2025</u></i>	

Contents

POINT WISE COMPLIANCE OF TOR CONDITIONS	25
1.1 PURPOSE OF THE REPORT	66
1.2 IDENTIFICATION OF PROJECT AND PROJECT PROPONENT	70
1.2.1 IDENTIFICATION OF PROJECT	70
1.2.2 IDENTIFICATION OF PROJECT PROPONENT	70
1.3 BRIEF DESCRIPTION OF THE PROJECT	70
1.3.1 NATURE AND SIZE OF THE PROJECT	70
1.3.2 NATURE OF THE PROJECT	72
1.3.3 LOCATION OF PROJECT	72
1.4 IMPORTANCE OF THE PROJECT TO THE REGION.....	72
1.5 REGULATORY COMPLIANCES	73
1.5.1 PRESENT LEGAL STATUS.....	74
1.5.2 SCREENING	75
1.5.3 SCOPE OF THE STUDY	75
1.6 NEED AND JUSTIFICATION OF THE PROJECT	76
1.7 STRUCTURE OF THE REPORT	77
2.0 PROJECT DESCRIPTION.....	80
2.1 TYPE OF THE PROJECT	80
2.2 NEED FOR THE PROJECT	80
2.3 LOCATION OF THE PROJECT	80
2.4 LAND USE PATTERN OF THE PROJECT AREA.....	86
2.5 SIZE AND MAGNITUDE OF THE OPERATION	87
2.6 TOPOGRAPHY AND DRAINAGE.....	87
2.7 GEOLOGY	87
2.7.1 REGIONAL GEOLOGY	87
2.7.2 LOCAL GEOLOGY	88
2.8 RESOURCES AND RESERVES.....	88
2.8.1 MINEABLE RESERVES.....	89
2.9 PROCESS DESCRIPTION AND TECHNOLOGY	89
2.9.1 PROCESS DESCRIPTON	89
	12

2.9.2	TYPE OF EXPLOSIVE	93
2.9.3	STORAGE OF EXPLOSIVES	93
2.9.4	PRODUCTION SCHEDULE	93
2.9.5	DISPOSAL OF WASTE	97
2.10	CONCEPTUAL MINING PLAN / FINAL MINE CLOSURE PLAN	97
2.11	PROJECT REQUIREMENT	99
2.11.1	WATER REQUIREMENT AND SOURCE	99
2.11.2	POWER REQUIREMENT	99
2.11.3	FUEL REQUIREMENT	99
2.11.4	EMPLOYMENT GENERATION	99
2.11.5	TRAFFIC DENSITY	100
2.11.6	INFRASTRUCTURE REQUIREMENT	103
2.11.7	PROJECT COST	103
2.11.8	PROJECT IMPLEMENTATION SCHEDULE	103
3.0	DESCRIPTION OF THE ENVIRONMENT	104
3.1	INTRODUCTION	104
3.2	STUDY AREA	104
3.3	STUDY PERIOD	105
3.4	MONITORING LAB	105
3.5	ENUMERATION OF THE STRUCTURES LOCATED WITHIN 300 M RADIUS FROM THE PROPOSED QUARRY SITE	105
3.6	ENVIRONMENTAL SETTINGS OF THE PROJECT	109
3.7	EXISTING ENVIRONMENTAL SCENARIO	113
3.7.1	MICRO- METEOROLOGY	113
3.7.1.1	CLIMATE AND RAINFALL DATA	113
3.7.2	AIR ENVIRONMENT	116
3.7.2.1	SAMPLING & ANALYTICAL TECHNIQUES	116
3.7.2.2	FREQUENCY AND PARAMETERS FOR SAMPLING	117
3.7.2.3	AMBIENT AIR QUALITY MONITORING STATIONS	117
3.7.2.4	DISCUSSION	121
3.7.3	WATER ENVIRONMENT	121

3.7.3.1	METHODOLOGY	121
3.7.3.2	SAMPLING LOCATIONS.....	122
3.7.3.3	DISCUSSION	124
3.7.4	NOISE ENVIRONMENT	125
3.7.4.1	SAMPLING LOCATIONS.....	125
3.7.4.2	METHOD OF MONITORING.....	126
3.7.4.3	NOISE MONITORING RESULT	126
3.7.4.4	DISCUSSION	127
3.7.5	SOIL ENVIRONMENT	128
3.7.5.1	MONITORING LOCATIONS.....	128
3.7.5.2	METHODOLOGY.....	128
3.7.5.3	SOIL TESTING RESULT	129
3.7.6	LAND ENVIRONMENT	131
3.7.6.1	LAND USE PATTERN OF THE PROJECT AREA.....	131
3.7.6.2	LAND USE PATTERN OF THE STUDY AREA.....	131
3.7.7	BIOLOGICAL ENVIRONMENT	133
3.7.7.1	FLORA.....	133
3.7.7.2	FLORISTIC COMPOSITION IN CORE ZONE.....	133
3.7.7.3	FLORISTIC SCENARIO IN BUFFER ZONE AREA.....	133
3.7.7.4	LIST OF FAUNA	136
3.7.8	TOPOGRAPHY	138
3.7.9	DRAINAGE PATTERN OF THE AREA	138
3.7.10	GEOMORPHOLOGY	139
3.7.11	GEOLOGY	140
3.7.12	SOCIO-ECONOMIC ENVIRONMENT	141
3.7.12.1	OBJECTIVES OF THE STUDY.....	142
3.7.12.2	SCOPE OF WORK.....	142
4.0	ANTICIPATED ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES.....	147
4.1	GENERAL.....	147
4.2	PROJECT SPECIFIC IMPACTS AND MITIGATION MEASURES.....	147

4.2.1 LAND ENVIRONMENT	148
4.2.1.1 ANTICIPATED IMPACT	148
4.2.1.2 MITIGATION MEASURES	149
4.2.2 SOIL ENVIRONMENT	150
4.2.2.1 ANTICIPATED IMPACT	150
4.2.2.2 MITIGATION MEASURES FOR SOIL EROSION AND SOIL CONSERVATION	151
4.2.3 WATER ENVIRONMENT	151
4.2.3.1 ANTICIPATED IMPACT ON SURFACE AND GROUND WATER	151
4.2.3.2 ANTICIPATED IMPACT DUE TO WATER USE IN MINE'S	152
4.2.3.3 MITIGATION MEASURES	152
4.2.3.4 RAINWATER HARVESTING PLAN	153
4.3 AIR ENVIRONMENT	154
4.3.1 IMPACT DUE TO MINING OPERATION	154
4.3.2 IMPACT ON AIR ENVIRONMENT	155
4.3.3 QUANTITATIVE ESTIMATION OF IMPACTS ON AIR ENVIRONMENT	155
4.3.4 SOURCES OF DUST EMISSION	156
4.3.5 EMISSION DETAILS	157
4.3.6 METEOROLOGICAL DATA	158
4.3.7 SUMMARY OF PREDICTED GROUND LEVEL CONCENTRATIONS	158
4.3.8 EMISSION SOURCES & QUANTIFICATION	159
4.4.4 NOISE ENVIRONMENT	171
4.4.4.3 IMPACT DUE TO NOISE AND VIBRATION	171
4.4.4.4 MITIGATION MEASURES FOR NOISE CONTROL	171
4.4.4.5 GROUND VIBRATION	172
4.4.5 BIOLOGICAL ENVIRONMENT	173
4.4.5.3 MITIGATION MEASURES	178
4.4.5.4 GREENBELT DEVELOPMENT PLAN	179

4.4.6	SOCIO – ECONOMIC	180
4.4.7	OCCUPATIONAL HEALTH AND SAFETY	181
4.4.8	WASTE MANAGEMENT	182
4.4.8.3	SOLID WASTE	182
4.4.8.4	LIQUID WASTE	182
4.4.8.5	HAZARDOUS WASTE MANAGEMENT	182
4.4.8.6	PLASTIC WASTE	183
5.0	ANALYSIS OF ALTERNATIVES (TECHNOLOGY AND SITE)	184
5.1	ALTERNATE TECHNOLOGY	184
5.2	ALTERNATE SITE	184
6	ENVIRONMENTAL MONITORING PROGRAMME	185
6.1	GENERAL	185
6.2	MONITORING MECHANISM	185
6.3	OBJECTIVES OF ENVIRONMENTAL MONITORING	185
6.4	ENVIRONMENTAL MONITORING SCHEDULE AND FREQUENCY	186
6.5	BUDGET FOR IMPLEMENTAION	187
6.6	SUBMISSION OF PERIODICAL REPORTS	187
7	ADDITIONAL STUDIES	188
7.1	PUBLIC CONSULTATION	188
7.2	RISK ASSESSMENT	188
7.3	DISASTER MANAGEMENT PLAN	192
7.3.1	MODEL DISASTER MANAGEMENT PLAN	192
7.3.2	OBJECTIVE OF DISASTER MANAGEMENT PLAN	193
7.4	CUMULATIVE IMPACT STUDY	194
7.4.1	PREDICTED EMISSION ESTIMATION FROM CLUSTER	201
7.4.2	CUMULATIVE IMPACT ON SOCIO-ECONOMIC ENVIRONMENT	207
7.5	CLUSTER MINE CLOSURE PLAN	207
7.6	SLOPE STABILITY PLAN	207
8	PROJECT BENEFITS	209
9	ENVIRONMENTAL COST BENEFIT ANALYSIS	210
10	ENVIRONMENTAL MANAGEMENT PLAN	211

**DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF
THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G,
623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT
OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK,
VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE**

10.1	ENVIRONMENTAL POLICY	211
10.2	ENVIRONMENTAL MANAGEMENT PLAN	211
10.3	ADMINISTRATION AND TECHNICAL SETUP	214
10.4	OCCUPATIONAL SAFETY & HEALTH MANAGEMENT	216
10.5	BUDGETARY PROVISION FOR ENVIRONMENTAL MANAGEMENT	216
10.6	CONCLUSION	219
11	SUMMARY AND CONCLUSION	220
11.1	INTRODUCTION.....	220
11.2	PROJECT DESCRIPTION.....	221
11.3	DESCRIPTION OF THE ENVIRONMENT	223
11.3.1	LAND ENVIRONMENT	224
11.3.2	SOIL CHARACTERISTICS.....	224
11.3.3	AMBIENT AIR QUALITY	225
11.3.4	WATER ENVIRONMENT	225
11.3.5	NOISE ENVIRONMENT	226
11.3.6	BIOLOGICAL ENVIRONMENT	226
11.3.7	SOCIO-ECONOMIC ENVIRONMENT	226
11.4	ANTICIPATED ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES	227
11.5	ANALYSIS OF ALTERNATIVES.....	234
11.6	ENVIRONMENTAL MONITORING PROGRAM.....	234
11.7	ADDITIONAL STUDIES	235
11.8	PROJECT BENEFITS	236
11.9	CONCLUSION	237
12	DISCLOSURE OF CONSULTANTS.....	238

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

List of Tables	
Description	Page No.
Table 1.1 Cluster Mines Details	67
Table 1.2 Project Identification	70
Table 1.3 Details of Project Proponent	70
Table 1.4 Brief Description of the project	71
Table 1.5 Present Legal Status	74
Table 2.1 Boundary Coordinates of the Project	81
Table 2.2 Mine Lease Area and its Ownership	81
Table 2.3 Site Connectivity	81
Table 2.4 Land use pattern of the Project area	86
Table 2.5 Available Geological Resources	88
Table 2.6 Available Mineable Reserves	89
Table 2.7 Machinery Details	93
Table 2.8 Year wise Production Plan	94
Table 2.9 Ultimate Pit Dimension	97
Table 2.10 Details of Water requirement	99
Table 2.11 Proposed Mineral Transportation	100
Table 2.12 Existing Traffic Flow	102
Table 2.13 Mineral Hourly Transportation Requirement	102
Table 2.14 Summary of Traffic Volume	102
Table 2.15 Modified Level of Service	103
Table 3.1 Structures within 300 m radius	106
Table 3.2 Environmental Settings of the Study Area – 10 km radius	109
Table 3.3 Rainfall Data	113
Table 3.4 Meteorological Data Recorded at Site	114
Table 3.5 Methodology for Air Quality Monitoring	116
Table 3.6 Ambient Air Quality Monitoring Locations	117
Table 3.7 Ambient Air Quality Data	118

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

Table 3.8 Water Sampling Locations	122
Table 3.9 Ground Water Analysis Results	123
Table 3.10 Noise Monitoring Locations	125
Table 3.11 Noise Monitoring Result	127
Table 3.12 Soil Sampling Locations	128
Table 3.13 Soil Testing Result	130
Table 3.14 Land use pattern of the project site	131
Table 3.15 Land use pattern of the Study area of 10 km radius	132
Table 3.16 List of Flora	134
Table 3.17 List of Fauna	136
Table 3.18 Population Profile of the Study Area	144
Table 4.1 Land use pattern of the project site	149
Table 4.2 Rainwater Harvesting Plan	154
Table 4.3 Concentrations of PM 2.5 after Project Implementation	166
Table 4.4 Cluster Concentration of PM 2.5 after Project Implementation	166
Table 4.5 Concentrations of PM 10 after Project Implementation	166
Table 4.6 Cluster Concentration of PM 2.5 after Project Implementation	167
Table 4.7 Mitigative Measures for Air Environment	168
Table 4.8 The likely noise level in the lease area	171
Table 4. 9 Ecological Impact Assessments and Its Mitigations -Part 1	173
Table 4.13 Ecological Impact Assessments and Its Mitigations -Part 2	176
Table 4.14 Greenbelt Development Plan	179
Table 6.1 Environmental Monitoring Schedule	186

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

Table 7.1 Risk Assessment and Control Measures	189
Table 7.2 Details of Quarries within 500m radius	195
Table 7. 3a Salient Features of Existing & Proposed Quarries	197
Table 7. 3b Salient Features of Existing & Proposed Quarries	198
Table 7.4 Concentrations of PM2.5 after Project Implementation	201
Table 7.5 Cluster Concentrations of PM2.5 after Project Implementation	201
Table 7.6 Concentrations of PM10 after Project Implementation	202
Table 7.7 Cluster Concentrations of PM10 after Project Implementation	202
Table 10.1 Environmental management plan	212
Table 10.2 Environmental Management Plan Budget	216
Table 11.1 Salient Features of the Project	221
Table 11.2 Land use Pattern of the study area	224

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

List of Figures	
Descriptions	Page No
Figure 1.1 Satellite Image showing cluster quarries	69
Figure 2.1 Location Map	82
Figure 2.2 Google image showing Corner Coordinates of the project site	83
Figure 2.3 Lease Plan	84
Figure 2.4 Village Map	85
Figure 2.5 Site Photographs	86
Figure 2.6 Process Flow Diagram	90
Figure 2.7 Geological, Year wise Development & Production Plan & Sections	91
Figure 2.8 Mineable Plan & Sections	92
Figure 2.9 Year wise Production Plan and Sections	96
Figure 2.10 Conceptual Plan and Sections	98
Figure 2.11 Mineral Transport Route	101
Figure 3.1 Photographs of the structures located within 300 m radius	106
Figure 3.1 Google Image showing structures located within 300 m radius	107
Figure 3.3 Environmental Features Within 500m Radius	108
Figure 3.4 Photographs of the Environmental Features Within 500m Radius	109
Figure 3.5 Satellite Image of the Study Area	111
Figure 3.6 Topo map Showing Study Area	112
Figure 3.7 Wind Rose Diagram – Blowing From (October – December 2023)	115
Figure 3.8 Ambient Air Quality Monitoring Locations	118
Figure 3.9 Graphical Representation of Air Quality Data	120
Figure 3.10 Water Monitoring Locations	122

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

Figure 3.11 Ground Water – Monitoring Results	124
Figure 3.12 Noise Monitoring Location	126
Figure 3.13 Noise Monitoring Results	127
Figure 3.14 Soil Map of the Study Area	129
Figure 3.15 Land use map of the study area	132
Figure 3.16 Drainage map of the study area	139
Figure 3.17 Geomorphology map of the study area	140
Figure 3.18 Geology map of the study area	141
Figure 3.19 Village Map of the Study Area	143
Figure 3.20 Gender wise Population Distribution	145
Figure 3.21 Gender wise Literacy Distribution	145
Figure 3.22 Occupational Structure within Buffer Zone	146
Figure 4.1 Water Balance Diagram	152
Figure 4.2 Isopleth of GLC Prediction for PM _{2.5}	162
Figure 4.3 Isopleth of GLC Prediction for PM ₁₀	163
Figure 4.4 Isopleth of GLC Prediction –Cumulative for PM _{2.5}	164
Figure 4.5 Isopleth of GLC Prediction –Cumulative for PM ₁₀	165
Figure 7.1 Cluster Isopleth of GLC Prediction for PM _{2.5}	203
Figure 7.2 Cluster Isopleth of GLC Prediction for PM ₁₀	204
Figure 7.3 Isopleth of GLC Prediction –Cumulative for PM _{2.5}	205
Figure 7.4 Isopleth of GLC Prediction –Cumulative for PM ₁₀	206
Figure 10.1 Organization Chart	215

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

List of Annexures	
Annexure – 1	Terms of Reference (TOR)
Annexure – 2	Precise Area Communication Letter
Annexure – 3	Mine Plan Approval Copy, approval book with annexures
Annexure – 4	Details of other leases within 500m radius
Annexure – 5	VAO Letter for features within 500 m radius
Annexure – 6	Land Document
Annexure – 7	Monitoring Report
Annexure - 8	Lab NABL Certificate
Annexure - 9	The Copy of CER Letter

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

COMPLIANCE TO **TERMS OF REFERENCE**

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

POINT WISE COMPLIANCE OF TOR CONDITIONS

S.No	TOR Points	Reply	Page No
1. SEIAA SPECIFIC CONDITIONS			
1.1	The Authority accepts the recommendation of SEAC-II and decided to grant Terms of Reference (ToR) along with Public Hearing for the quantity of 244,440 m ³ of Rough Stone & 72,930 m ³ of Gravel up to the depth of 45m BGL. The annual peak production is 42,400m ³ of Rough Stone & 19,380 m ³ of Gravel as per the approved mining plan, under cluster for undertaking the combined Environment Impact Assessment Study and preparation of separate Environment Management Plan subject to the conditions as recommended by SEAC-II & normal conditions & the conditions mentioned in Annexure of this minute.	Agreed	
2. SEAC Conditions – Site Specific			
2.1	A Cluster Management Committee (CMC) shall be constituted including all the mines in the cluster as Committee Members for the effective management of the mining operation in the cluster through systematic & scientific approach with appointment of	Agreed	

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

	statutory personnel, appropriate environmental monitoring, good maintenance of haul roads and village/panchayat roads, authorized blasting operation etc. The PP shall submit the following details in the form of an Affidavit during the EIA appraisal: (i) Copy of the agreement forming CMC. (ii) The Organisation chart of the Committee with defining the role of the members The "Standard Operating Procedures" (SoP) executing the planned activities.		
2	The Boundary pillars to be erected as per the mine rules and the evidence should be submitted along with the EIA report.	Agreed. Proof photographs for erected pillars will be submitted in the Final EIA / EMP Report.	
3	Since water bodies are situated nearby, the PP shall carry out the scientific studies to assess the hydrogeological condition of the quarry to determine impacts of the mining operation on the ground water conditions in the waterbodies.	A detailed Hydrogeological Report will be incorporated in the Final EIA Report.	
4	The details of enumeration of structures including schools, colleges, primary health centres should be submitted along with the EIA report.	There are no School, Temple, College and health centers within 300 m radius from the proposed project site.	

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

5	The structures within the radius of (i) 50 m, (ii) 100 m, (iii) 200 m and (iv) 300 m & upto 1km shall be enumerated with details such as dwelling houses with number of occupants, whether it belongs to the owner (or) not, places of worship, industries, factories, sheds, etc. and spell out the mitigation measures to be proposed for the protection of the above structures, if any during the quarrying operations.	A Site survey has been conducted to identify and list structures located within a 300 m radius from the proposed Quarry and structures located within 300 m radius are given in section 3.5 of Chapter 3. Structures details from 300 m to 1 km will be incorporated in the Final EIA / EMP Report.	
6	The proponent shall furnish photographs of adequate fencing, garland drainage built with siltation tank & green belt along the periphery including replantation of existing trees; maintaining the safety distance between the adjacent quarries & water bodies nearby provided as per the approved mining plan.	The green belt, fencing, garland drain work are in process and the proof photographs of the same will be submitted in the Final EIA/EMP Report. As per Precise Order Condition No.1, A safety distance of 7.5m has been provided to the adjacent Patta lands and as per Condition No.2, A safety distance of 10m for Car track and Odai is maintained passing on Northern and Eastern side situated in S.F.No.611 and S.F.No.624 from the lease applied area and the same will be complied during the quarrying operations.	
7	The Proponent shall carry out Bio diversity study as a part of EIA study and the same shall be included in the Report.	The bio diversity study has been carried out by our FAE is given in section 3.7.7 of Chapter 3.	

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

8	The PP shall prepare the EMP for the entire project life of mine, i.e, 10 years and also furnish the sworn affidavit stating to abide the EMP for the entire life of mine.	A detailed Environmental Management Plan has been prepared and are detailed in chapter 10. Affidavit stating to abide the EMP for the entire life of mine will be incorporated in the Final EIA / EMP Report.	
9	The PP shall carry out the comprehensive studies on the cumulative environmental impacts of the existing & proposed quarries which included drilling & blasting, loading & hauling on the surrounding village and structures.	Cumulative impact study due to mining operations in cluster are given in Section 7.4 of Chapter 7. Anticipated impacts and its mitigation measures for various attributes are detailed in Chapter 4.	
10	The PP shall prepare a conceptual action plan accommodating the inclusion of haul road accessibility keeping the benches intact, by ensuring the slope stability of the working benches to be constructed and existing quarry wall.	Agreed. Will be complied.	
11	The PP shall install the CCTV camera for the continuous surveillance of mining activity & furnish the photographic/ videographic evidence along with the EIA report.	Agreed, The PP will install CCTV at the proposed mine lease area and submit proof in the Final EIA/EMP report.	
SEAC Conditions - Standard			
1	In the case of existing/operating mines, a letter obtained from the concerned AD (Mines) shall be submitted and it shall include the following: (i) Original pit dimension (ii) Quantity achieved Vs EC Approved Quantity (iii) Balance	It is fresh Quarry lease applied area.	-

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

	Quantity as per Mineable Reserve calculated. (iv) Mined out Depth as on date Vs EC Permitted depth (v) Details of illegal/illicit mining (vi) Violation in the quarry during the past working. (vii) Quantity of material mined out outside the mine lease area (viii) Condition of Safety zone/benches (ix) Revised/Modified Mining Plan showing the benches of not exceeding 6 m height and ultimate depth of not exceeding 50m.		
2	Details of habitations around the proposed mining area and latest VAO certificate regarding the location of habitations within 300m radius from the periphery of the site.	VAO certificate regarding the location of habitations within 300m radius from the periphery of the site is attached as Annexure. There are no approved Structures within 300 m Radius.	-
3	The proponent is requested to carry out a survey and enumerate on the structures located within the radius of (i) 50 m, (ii) 100 m, (iii) 200 m and (iv) 300 m (v) 500m shall be enumerated with details such as dwelling houses with number of occupants, whether it belongs to the owner (or) not, places of worship, industries, factories, sheds, etc with indicating the owner of the building, nature of construction, age of the	A Site survey has been conducted to identify and list structures located within a 300 m radius from the Proposed Quarry and structures located within 300 m radius are given in section 3.5 of Chapter 3.	108

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

	building, number of residents, their profession and income, etc.		
4	The PP shall submit a detailed hydrological report indicating the impact of proposed quarrying operations on the waterbodies like lake, water tanks, etc located within 1 km of the proposed quarry.	A detailed hydro-geological report of the proposed project will be incorporated in the Final EIA/EMP Report.	--
5	The Proponent shall carry out Bio diversity study through Department of Ecology and Environmental Sciences. Pondicherry University and the same shall be included in EIA Report.	The bio diversity study has been carried out by our FAE is given in section 3.7.7 of Chapter 3.	-140
6	The DFO letter stating that the proximity distance of Reserve Forests, Protected Areas, Sanctuaries, Tiger reserve etc., up to a radius of 25 km from the proposed site.	There is no R.E within 10 km radius of the project site and the nearest R.F is Kothankulam R.F. – 10.2 km (NW). DFO letter will be incorporated in the Final EIA report.	-
7	In the case of proposed lease in an existing (or old) quarry where the benches are not formed (or) partially formed as per the approved Mining Plan, the Project Proponent (PP) shall the PP shall carry out the scientific studies to assess the slope stability of the working benches to be constructed and existing quarry wall, by involving any one of the reputed Research and Academic Institutions - CSIR-Central Institute of Mining & Fuel Research / Dhanbad, NIRM/Bangalore, Division of	Not Applicable This is a proposed new project. No mining has been carried out in this lease area so far.	-

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

	Geotechnical Engineering-IIT-Madras, NIT-Dept of Mining Engg, Surathkal, and Anna University Chennai-CEG Campus. The PP shall submit a copy of the aforesaid report indicating the stability status of the quarry wall and possible mitigation measures during the time of appraisal for obtaining the EC.		
8	However, in case of the fresh/virgin quarries, the Proponent shall submit a conceptual 'Slope Stability Plan' for the proposed quarry during the appraisal while obtaining the EC, when the depth of the working is extended beyond 30 m below ground level.	Not Applicable This is a proposed new project. No mining has been carried out in this lease area so far.	-
9	The PP shall furnish the affidavit stating that the blasting operation in the proposed quarry is carried out by the statutory competent person as per the MMR 1961 such as blaster, mining mate, mine foreman, II/I Class mines manager appointed by the proponent.	Affidavit for blasting operation will be incorporated in the Final EIA/EMP report.	-
10	The PP shall present a conceptual design for carrying out only controlled blasting operation involving line drilling and muffle blasting in the proposed quarry such that the blast-induced ground vibrations are controlled as well as no fly rock travel beyond 30 m from the blast site.	Controlled blasting techniques using delay detonators and optimum charge per delay will be implemented in this Quarry.	-

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

11	The EIA Coordinators shall obtain and furnish the details of quarry/quarries operated by the proponent in the past, either in the same location or elsewhere in the State with video and photographic evidences.	Prior to this project, the PP had not carried out any quarrying operations.	-
12	If the proponent has already carried out the mining activity in the proposed mining lease area after 15.01.2016, then the proponent shall furnish the following details from AD/DD, mines,	Not Applicable. This is a proposed new project. No mining has been carried out in this lease area so far.	-
13	What was the period of the operation and stoppage of the earlier mines with last work permit issued by the AD/DD mines?		-
14	Quantity of minerals mined out. · Highest production achieved in any one year · Detail of approved depth of mining. · Actual depth of the mining achieved earlier. · Name of the person already mined in that leases area. · If EC and CTO already obtained, the copy of the same shall be submitted. · Whether the mining was carried out as per the approved mine plan (or EC if issued) with stipulated benches.		-
15	All corner coordinates of the mine lease area, superimposed on a High-Resolution Imagery/Topo sheet, topographic sheet, geomorphology, lithology and geology of the mining	Project coordinates superimposed in satellite imagery and topo map given as Figure No – 3.5 and Figure 3.6.	115

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

	lease area should be provided. Such an Imagery of the proposed area should clearly show the land use and other ecological features of the study area (core and buffer zone).	Geology and Geomorphology map are provided in Figure No – 3.19 and Figure 3.18, Chapter 3. Soil map is provided under Chapter-3. 10km Radius Index plan showing buffer zone is given in Chapter – 3.	146 107 107
16	The PP shall carry out Drone video survey covering the cluster, green belt, fencing, etc.,	It will be complied after commencement of the mining operation.	-
17	The proponent shall furnish photographs of adequate fencing, green belt along the periphery including replantation of existing trees & safety distance between the adjacent quarries & water bodies nearby provided as per the approved mining plan.	Photographs of the site are provided in Figure 2.5 of Chapter-2. There is an Odai located adjacent to Eastern Side (10m Safety Maintained) and Tank – 420m (S). Solasseri River – 1.3 km (SW) Cholapuram River – 2.1 km (SW) Odai – 2.5 km (NE) Canal – 1.69 km (S) Green belt is being developed over an area of 0.42.50 Ha. The work of the same is under process.	85
18	The Project Proponent shall provide the details of mineral reserves and mineable reserves, planned production capacity, proposed working methodology with justifications, the anticipated	Geological reserves - Rough stone 7,61,600 m ³ & Gravel 95,200 m ³ and the mineable reserves: Rough stone 2,44,440 m ³ & Gravel 72,930 m ³ . The proposed production is Rough	154

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

	impacts of the mining operations on the surrounding environment, and the remedial measures for the same.	stone 2,44,440 m ³ & Gravel 72,930 m ³ by Opencast Mechanized mining method for ten years. The anticipated impact and its mitigation measures are detailed in Chapter 4.	
19	The Project Proponent shall provide the Organization chart indicating the appointment of various statutory officials and other competent persons to be appointed as per the provisions of the Mines Act'1952 and the MMR, 1961 for carrying out the quarrying operations scientifically and systematically in order to ensure safety and to protect the environment.	Complied. Please refer figure 10.1 of Chapter 10.	223
20	The Project Proponent shall conduct the hydro-geological study considering the contour map of the water table detailing the number of groundwater pumping & open wells, and surface water bodies such as rivers, tanks, canals, ponds, etc. within 1 km (radius) along with the collected water level data for both monsoon and non-monsoon seasons from the PWD / TWAD so as to assess the impacts on the wells due to mining activity. Based on actual monitored data, it may clearly be shown whether working will intersect groundwater. Necessary data and	Hydro-geological study report will be incorporated in the Final EIA / EMP report.	-

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

	documentation in this regard may be provided.		
21	The proponent shall furnish the baseline data for the environmental and ecological parameters with regard to surface water/ground water quality, air quality, soil quality & flora/fauna including traffic/vehicular movement study.	The baseline data were collected (March to May 2025) for the environmental components including land, soil, water, air, noise, biology, socio-economy, and the results have been discussed in Chapter 3.	107
22	The Proponent shall carry out the Cumulative impact study due to mining operations carried out in the quarry specifically with reference to the specific environment in terms of soil health, biodiversity, air pollution, water pollution, climate change and flood control & health impacts. Accordingly, the Environment Management plan should be prepared keeping the concerned quarry and the surrounding habitations in the mind.	Detailed cumulative impact study has been carried and the same is incorporated in the Chapter 7. Accordingly, a detailed Environment Management Plan is prepared considering air, water, noise and soil environment and the details are given in Chapter 10.	194 223
23	Rain water harvesting management with recharging details along with water balance (both monsoon & non-monsoon) be submitted.	Runoff water during rainy season will be collected in the bottom quarry through proper drainage pattern and the collected water will be used for plantation and dust suppression during dry season. Rain water harvesting Plan is given in section 4.2.3.4 of chapter 4. The water balance is given in chapter 4.	160

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

24	Land use of the study area delineating forest area, agricultural land, grazing land, wildlife sanctuary, national park, migratory routes of fauna, water bodies, human settlements and other ecological features should be indicated. Land use plan of the mine lease area should be prepared to encompass preoperational, operational and post operational phases and submitted. Impact, if any, of change of land use should be given.	Land use of the study area delineating forest area, agricultural land, grazing land, wildlife sanctuary, national park, migratory routes of fauna, water bodies, human settlements and other ecological features has been discussed in Section 3.7.6 of Chapter 3. The land use plan of the project area showing pre-operational, operational and post-operational phases are discussed in section 2.4 of Chapter 2.	138
25	Details of the land for storage of Overburden/Waste Dumps (or) Rejects outside the mine lease, such as extent of land area, distance from mine lease, its land use, R&R issues, if any, should be provided.	As per the mining plan, there is no overburden anticipated during the entire Rough Stone quarrying operation. The excavated rough stone will be directly loaded into a tipper to the needy crusher/other buyers.	-
26	Proximity to Areas declared as 'Critically Polluted' (or) the Project areas which attracts the court restrictions for mining operations, should also be indicated and where so required, clearance certifications from the prescribed Authorities, such as the TNPCB (or) Dept. of Geology and Mining should be secured and furnished to the effect that the proposed mining activities could be considered.	Not applicable. The project is not located in any of the said areas mentioned in the condition.	-

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

27	Description of water conservation measures proposed to be adopted in the Project should be given. Details of rainwater harvesting proposed in the Project, if any, should be provided.	Rain water falling in the quarry will be harvested in the sump at the lowest level of the quarry. This sump will act as a settling pond to prevent solids escaping along with discharge, before outlet. etc. Towards surface runoff management, a garland drain will be constructed around the quarry and will be connected to a settling pond with silt traps. The supernatant clear water from the settling pond will be flow to the downstream users. Rain water harvesting plan is given in section 4.2.3.4 of Chapter 4.	160
28	Impact on local transport infrastructure due to the Project should be indicated.	There is no significant impact on the local traffic due to the proposed project.	-
29	A tree survey study shall be carried out (nos., name of the species, age, diameter etc.,) both within the mining lease applied area & 300m buffer zone and its management during mining activity.	Flora species within 300 m radius is given in section 3.7.7.	140
30	A detailed mine closure plan for the proposed project shall be included in EIA/EMP report which should be site-specific.	Detailed Mine Closure plan is given in Chapter 2, sec 2.10.	103
31	As a part of the study of flora and fauna around the vicinity of the proposed site, the EIA coordinator shall strive to educate the local	Accepted. It will be done.	-

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

	students on the importance of preserving local flora and fauna by involving them in the study, wherever possible.		
32	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-I in consultation with the DFO, State Agriculture University. 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.	The Greenbelt plan is detailed in Chapter 4, Sec 4.4.5.4.	185
33	Taller/one year old Saplings raised in appropriate size of bags, preferably ecofriendly bags should be planted 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.	Accepted. Green belt development work is in progress. Proof photographs on green belt will be incorporated in the Final EIA / EMP report.	-
34	A Disaster management Plan shall be prepared and included in the EIA/EMP Report for the complete life	A disaster management plan is prepared and details are given in Chapter 7, Sec 7.3.	199

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

	of the proposed quarry (or) till the end of the lease period.		
35	A Risk Assessment and management Plan shall be prepared and included in the EIA/EMP Report for the complete life of the proposed quarry (or) till the end of the lease period.	A Risk Assessment and management Plan is prepared and given in Chapter 7, Sec 7.2.	194
36	Occupational Health impacts of the Project should be anticipated and the proposed preventive measures spelt out in detail. Details of pre-placement medical examination and periodical medical examination schedules should be incorporated in the EMP. The project specific occupational health mitigation measures with required facilities proposed in the mining area may be detailed.	Anticipated Occupational Health impacts of the project is given detailed in Chapter 4. Sec 4.4.7	187
37	Public health implications of the Project and related activities for the population in the impact zone should be systematically evaluated and the proposed remedial measures should be detailed along with budgetary allocations.	No major impact on public health will be there since the villages are located more than 1km from the lease area. Details of CER are discussed under Chapter No. 8	221
38	The Socio-economic studies should be carried out within a 5 km buffer zone from the mining activity. Measures of socio-economic significance and influence to the local community proposed to be provided by the Project Proponent should be indicated. As far as possible,	Detailed Socio-Economic study is carried out and it is given in Chapter 3, Sec 3.7.12	148

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

	quantitative dimensions may be given with time frames for implementation.		
39	Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the Project should be given.	There is no litigation pending against the project.	-
40	Benefits of the Project if the Project is implemented should be spelt out. The benefits of the Project shall clearly indicate environmental, social, economic, employment potential, etc.	The project benefits are given in Chapter 8.	221
41	If any quarrying operations were carried out in the proposed quarrying site for which now the EC is sought, the Project Proponent shall furnish the detailed compliance to EC conditions given in the previous EC with the site photographs which shall duly be certified by MoEF&CC, Regional Office, Chennai (or) the concerned DEE/TNPCB.	Not Applicable. This is a proposed new project. No mining has been carried out in this lease area so far.	-
42	The PP shall prepare the EMP for the entire life of mine and also furnish the sworn affidavit stating to abide the EMP for the entire life of mine.	Affidavit for considering EMP for the entire life will be incorporated in the Final EIA/EMP Report.	-
43	Concealing any factual information or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this Terms of Conditions besides	Noted and Agreed.	-

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

	attracting penal provisions in the Environment (Protection) Act, 1986.		
SEIAA Standard Conditions:			
Cluster Management Committee			
1	Cluster Management Committee shall be framed which must include all the proponents in the cluster as members including the existing as well as proposed quarry.	There are Four existing quarries and two proposed quarries including this proposal, within a 500-metre radius. The proponent will take the initiative to form a cluster management committee once environmental clearance is obtained for this quarry.	-
2	The members must coordinate among themselves for the effective implementation of EMP as committed including Green Belt Development, water sprinkling, tree plantation, blasting etc.,	Agreed and will be complied.	--
3	The List of members of the committee formed shall be submitted to AD/Mines before the execution of mining lease and the same shall be updated every year to the AD/Mines.	Agreed. The list of members of the committee formed will be submitted to ad/mines after obtaining Environmental Clearance.	-
4	Detailed Operational Plan must be submitted which must include the blasting frequency with respect to the nearby quarry situated in the cluster, the usage of haul roads by the individual quarry in the form of route map and network.	Agreed. Details of the Operation plan for cluster mining operations will be submitted once we get environmental clearance for all the quarries proposed in the cluster area.	-
5	The committee shall deliberate on risk management plan pertaining to the cluster in a holistic manner	Risk management plan for the individual quarry is given in this report. As far as cluster working	-

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

	especially during natural calamities like intense rain and the mitigation measures considering the inundation of the cluster and evacuation plan.	condition is concerned, once the committee is formed, risk management as a cluster including inundation of clusters and the evacuation plan will be elaborated.	
6	The Cluster Management Committee shall form Environmental Policy to practice sustainable mining in a scientific and systematic manner in accordance with the law. The role played by the committee in implementing the environmental policy devised shall be given in detail.	Environmental policy for the cluster will be framed by the cluster management committee and the policy will be in accordance with EPA Act, 1986 and its amendments, guidelines by MoEFCC/SEIAA and other regulatory bodies. This policy will be displayed in the quarry.	-
7	The committee shall furnish action plan regarding the restoration strategy with respect to the individual quarry falling under the cluster in a holistic manner.	Agreed. It will be complied as mentioned in the Point No.4.	-
8	The committee shall deliberate on the health of the workers/staff involved in the mining as well as the health of the public in the vicinity.	Agreed. It will be complied as mentioned in the Point No.4	-
Agriculture & Agrobiodiversity			
9	impacts on surrounding agricultural fields around the proposed mining Area.	There are no Agriculture, forest area and traditional practices within the project area. However, there are some agricultural land around the project site. It may be affected due to the quarry operation as such dust particles sedimentation in the agricultural	-

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

		land. It will be controlled at the source level by proper dust suppression as such wet drilling, controlled blasting and water sprinkling on the project roads and project surrounding roads. As per Air Quality Modelling, the impact of the air quality limited to 400m radius. So, there is no impact for the Agriculture, Forestry & Traditional practices located within 10km radius.	
10	impacts on soil flora & vegetation around the project site.	The chemical and physical characteristics of the soil is given in Chapter 3. The anticipated impact and its mitigation measures for soil environment and biological environment are detailed in section 4.4.5 of Chapter 4 respectively.	107 179
11	Details of type of vegetations including no. of trees & shrubs within the proposed mining area and. If so, transplantation of such vegetations all along the boundary of the proposed mining area shall committed mentioned in EMP.	The details on flora have been provided in Section 3.7.7.1 under Chapter 3. There is no schedule I species of animals observed within study area as per Wildlife Protection Act, 1972 and no species falls in vulnerable, endangered or threatened category as per IUCN. There is no endangered red list species found in the study area	140

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

12	The Environmental Impact Assessment should study the biodiversity, the natural ecosystem, the soil micro flora, fauna and soil seed banks and suggest measures to maintain the natural Ecosystem.	The ecological details have been provided in Section 3.7.7 under Chapter 3 and measures have been provided in Section 4.4.5 under Chapter 4.	140 & 179
13	Action should specifically suggest for sustainable management of the area and restoration of ecosystem for flow of goods and services.	All the essential environmental protective measures will be followed by the proponent to manage the surrounding environment and restore the ecosystem, as discussed in Chapter 4.	154
14	The project proponent shall study and furnish the impact of project on plantations in adjoining patta lands, Horticulture, Agriculture and livestock.	The impact of project on the land environment has been discussed in Section 4.2.1 under Chapter 4.	155
Forests			
15	The project proponent shall detailed study on impact of mining on Reserve forests free ranging wildlife	Nil within a 10Km radius. Kothankulam R.F. – 10.2 km (NW). The anticipated impact and its mitigation measures for biological environment are detailed in section 4.4.5 of Chapter 4. The project proponent shall do barbed wire fencing work and develop a green belt around the lease area to prevent wildlife from entering the site.	179
16	The Environmental Impact Assessment should study impact on forest, vegetation, endemic,	The impacts of the project on ecology and biodiversity have	179

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

	vulnerable and endangered indigenous flora and fauna	been discussed in Section 4.4.5 under Chapter 4.	
17	The Environmental Impact Assessment should study impact on standing trees and the existing trees should be numbered and action suggested for protection.	Not Applicable.	-
18	The Environmental Impact Assessment should study impact on protected areas, Reserve Forests, National Parks, Corridors and Wildlife pathways, near project site.	There are no protected areas, National Parks, environmentally sensitive areas Corridors and Wildlife pathways near project site. The list of environmentally sensitive areas within 10 km radius has been provided in Chapter 3.	-
Water Environment			
19	Hydro-geological study considering the contour map of the water table detailing the number of ground water pumping & open wells, and surface water bodies such as rivers, tanks, canals, ponds etc. within 1 km (radius) so as to assess the impacts on the nearby waterbodies due to mining activity. Based on actual monitored data, it may clearly be shown whether working will intersect groundwater. Necessary data and documentation in this regard may be provided, covering the entire mine lease period.	A detailed hydrogeological report will be included in the final EIA/EMP report.	-
20	Erosion Control measures.	There is no waste generation (OB) in this quarry has been envisaged. However, there may	154

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

		be erosion due the rainy season and that is limited within quarry area. The control measures are explained in Chapter 4.	
21	Detailed study shall be carried out in regard to impact of mining around the proposed mine lease area on the nearby Villages, Water-bodies/ Rivers, & any ecological fragile areas	Complied. The study details are incorporated in Chapter 3. Anticipated impacts and its mitigation measures are detailed in Chapter 4.	154
22	The project proponent shall study impact on fish habitats and the food WEB/ food chain in the water body and Reservoir.	There is no wastewater generation from this Quarry, so this is not applicable.	-
23	The project proponent shall study and furnish the details on potential fragmentation impact on natural environment by the activities.	Fragmentation impact on the environment may be due to drilling and blasting. The anticipated impacts and mitigation measures are discussed in Chapter 4.	154
24	The project proponent shall study and furnish the impact on aquatic plants and animals in water bodies and possible scars on the landscape, damages to nearby caves, heritage site, and archaeological sites possible land form changes visual and aesthetic impacts	The Flora and Fauna study covering 10 km radius are detailed in section 3.7.7 of chapter 3. The impacts anticipated with respect to the environment of the project area is very negligible and it will be minimized within the project area. Greenbelt / Plantation will be carried out to enhance the vegetative growth and aesthetic in the safety zone area.	140

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

25	The Terms of Reference should specifically study impact on soil health, soil erosion, the soil physical, chemical components and microbial components.	The impact of mining on soil environment has been discussed in Section 4.2.2 under Chapter 4.	157
26	The Environmental Impact Assessment should study on wetlands, water bodies, rivers streams, lakes and farmer sites.	The anticipated impact and its mitigation measures for Water Environment are detailed in section 4.2.3 of Chapter 4.	158
27	The EIA shall include the impact of mining activity on the following: a) Hydrothermal/Geothermal effect due to destruction in the Environment. B) Bio-geochemical processes and its foot prints including Environmental stress. C) Sediment geochemistry in the surface streams.	The proposed quarry operation is Opencast Mechanized operation with drilling, blasting, excavation, loading and transportation. So, the effect of Hydrothermal/Geothermal is not envisaged.	-
Energy			
28	The measures taken to control Noise, Air, Water, Dust Control and steps adopted to efficiently utilize the Energy shall be furnished	The measures taken to control noise, air, water, and dust have been given under Chapter 4.	154
Climate Change			
29	The Environmental Impact Assessment shall study in detail the carbon emission and also suggest the measures to mitigate carbon emission including development of carbon sinks and temperature reduction including control of other emission and climate mitigation activities.	Only the best equipment will be used, and it will be properly and regularly maintained. Regular vehicular emission tests will be conducted on the transport vehicles to ensure minimal carbon emissions. To further reduce carbon emissions, a good greenbelt plan has been planned.	-
30	The Environmental Impact Assessment should study impact on		-

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

	climate change, temperature rise, pollution and above soil & below soil carbon stock, soil health and physical, chemical & biological soil features.		
31	Impact of mining on pollution leading to GHGs emissions and the impact of the same on the local livelihood.		-
Mine Closure Plan			
32	Detailed Mine Closure Plan covering the entire mine lease period as per precise area communication order issued.	Detailed mine closure plan is given in section 7.5 of Chapter 7. Post mining land use pattern is shown in section 2.10 of Chapter 2.	219 & 103
EMP			
33	Detailed Environment Management Plan along with adaptation, mitigation & remedial strategies covering the entire mine lease period as per precise area communication order issued and the scope for achieving SDGs.	Complied. The details are described in Chapter 10.	223
34	The Environmental Impact Assessment should hold detailed study on EMP with budget for Green belt development and mine closure plan including disaster management plan.	Total EMP Cost for 10 years is 35.22 lakhs i.e., 9.18 Lakhs of Capital Cost + 26.04 Lakhs of Recurring Cost (For 10 Years) The breakup of the same is given in Table 10.2 of Chapter 10.	229
Risk Assessment			
35	To furnish risk assessment and management plan including anticipated vulnerabilities during	Risk assessment and Management plan are detailed in section 7.2, chapter 7.	194

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

	operational and post operational phases of Mining.		
Disaster Management Plan			
36	To furnish disaster management plan and disaster mitigation measures in regard to all aspects to avoid,/reduce vulnerability to hazards & to cope with disaster/untoward accidents in & around the proposed mine lease area due to the proposed method of mining activity & its related activities covering the entire mine lease period as per precise area communication order issued.	Disaster Management plan are detailed in section 7.3, Chapter 7.	199
Others			
37	The project Proponent shall furnish VAO certificate with reference to 300m radius regard to approved habitations, schools, Archaeological sites, Structures, railway lines, roads, water bodies such as streams, odai, vaari, canal, channel, river, lake pond, tank etc.	Compiled. There are no historical places, schools, cemeteries, bird sanctuaries, and wildlife sanctuaries within 300 meters of the proposed project area.	-
38	As per the MoEF& cc office memorandum F.No.z2-6512017-tA.III dated: 30.09.2020 and 20.10.2020 the proponent shall address the concerns raised during the public consultation and all the activities proposed shall be part of the Environment Management plan.	The concerns raised during the public consultation and all the activities proposed will be updated in the final EIA report.	-
39	The project proponent shall study and furnish the possible pollution due to plastic and microplastic on the	Complied. The PP has framed detail solid waste management system for the project and the	-

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

	environment. The ecological risks and impacts of plastic & microplastics on aquatic environment and fresh water systems due to activities, contemplated during mining may be investigated and reported.	same will be executed by proper awareness and sign boards. The sign boards will be in two language i.e., Vernacular language (Tamil) and common language (English). The plastic waste generation is very negligible and it will be collected from the source level in specific dustbin and disposed through the municipal bins.	
C. Standard ToR			
1	Year-wise production details since 1994 should be given, clearly stating the highest production achieved in any one year prior to 1994. It may also be categorically informed whether there had been any increase in production after the EIA Notification 1994 came into force. w.r.t. the highest production achieved prior to 1994	Not applicable.	-
2	A copy of the document in support of the fact that the proponent is the rightful lessee of the mine should be given.	This proposed project area is classified as Patta land, registered in the name of applicant vide Patta No. 2440 and 2450. Please refer Annexure 6.	-
3	All documents including approved mine plan, EIA and public Hearing should be compatible with one another in terms of the mine lease area, production levels, waste generation and its management,	Noted & agreed. All documents including approved mine plan, EIA and Public Hearing are compatible with one another in terms of the mine lease area, production levels, waste	-

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

	mining technology etc. and should be in the name of the lessee.	generation and its management, mining technology etc. and is in the name of the lessee.	
4	All corner coordinates of the mine lease area, superimposed on a High-Resolution Imagery/ topo sheet, topographic sheet, geomorphology and geology of the area should be provided. Such an Imagery of the proposed area should clearly show the land use and other ecological features of the study area (core and buffer zone).	Project area is superimposed on Satellite imagery is enclosed in Figure No. 3.4. Project area boundary coordinates superimposed on Toposheet & Surface Features around the project area covering 10km radius. Geology Map and Geomorphology Map of the Study Area covering 10 km radius of Figure No. 3.19 and Figure No. 3.18 in Chapter 3.	107
5	Information should be provided in Survey of India Topo sheet in 1:50,000 scale indicating geological map of the area, geomorphology of land forms of the area, existing minerals and mining history of the area, important water bodies, streams and rivers and soil characteristics.	The following map in 1:50,000 Scale: Geology Map and Geomorphology Map of the Study Area covering 10 km radius of Figure No. 3.19 and Figure No. 3.18 in Chapter 3.	107
6	Details about the land proposed for mining activities should be given with information as to whether mining conforms to the land use policy of the State; land diversion for mining should have approval from State land use board or the concerned authority.	Not Applicable. The proposed land is Patta land, The copy of the land document is attached as Annexure – 6.	-
7	It should be clearly stated whether the proponent company has a well	The proposed quarry is small scale magnitude operation and	223 & 229

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

	laid down Environment Policy approved by its Board of Directors? If so, it may be spelt out in the EIA Report with description of the prescribed operating process/procedures to bring into focus any infringement/deviation/violation of the environmental or forest norms/ conditions? The hierarchical system or administrative order of the Company to deal with the environmental issues and for ensuring compliance with the EC conditions may also be given. The system of reporting of non-compliances / violations of environmental norms to the Board of Directors of the company and/or shareholders or stakeholders at large, may also be detailed in the EIA Report.	controlled by the lessee individually by engaging optimum statutory personals. Based on the magnitude of the operation, the PP has framed Environmental Policy and the same is incorporated in section 10.4 of Chapter 10. The Mines Manager will undertake effective monitoring and implementation of various environmental control measures promptly and effectively and to oversee various environmental management schemes for air quality control, water quality status, noise level control, plantation program, social development schemes, etc in the mine. The organizational chart for the same has been provided in Figure No.10.1, Chapter-10.	
8	Issues relating to Mine Safety, including subsidence study in case of underground mining and slope study in case of open cast mining, blasting study etc. should be detailed. The proposed safeguard measures in each case should also be provided.	Various risks likely to arise due to mining activities are detailed under section 7.2, Chapter 7. This being an opencast mine, subsidence is not applicable. The impact due to ground vibrations due to blasting is given in Chapter 4.	194 & 154
9	The study area will comprise of 10 km zone around the mine lease from lease periphery and the data	Noted & Agreed. The study area considered for this study is 10 km radius and all	-

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

	contained in the EIA such as waste generation etc. should be for the life of the mine / lease period.	data contained in the EIA report such as waste generation etc., is for the Life of the Mine / lease period.	
10	Land use of the study area delineating forest area, agricultural land, grazing land, wildlife sanctuary. national park, migratory routes of fauna, water bodies, human settlements and other ecological features should be indicated. Land use plan of the mine lease area should be prepared to encompass preoperational, operational and post operational phases and submitted. Impact, if any, of change of land use should be given.	Satellite imagery has been used to study land use and the details of land use in the core and buffer zone is given in Chapter 3.	107
11	Details of the land for any Over Burden Dumps outside the mine lease, such as extent of land area, distance from mine lease, its land use, R&R issues, if any, should be given.	There is no waste generation anticipated in this quarry operation since the entire excavated material will be utilized. The top soil generated will be utilized for afforestation purpose. Hence, there is no external overburden dump involved.	-
12	A Certificate from the Competent Authority in the State Forest Department should be provided, confirming the involvement of forest land, if any, in the project area. In the event of any contrary claim by the Project Proponent regarding the	There is no Forest Land involved in the proposed project area. The proposed project area is a Patta land. Approved Mining Plan is enclosed in Annexure – 3.	-

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

	status of forests, the site may be inspected by the State Forest Department along with the Regional Office of the Ministry to ascertain the status of forests, based on which, the Certificate in this regard as mentioned above be issued. In all such cases, it would be desirable for representative of the State Forest Department to assist the Expert Appraisal Committees.		
13	Status of forestry clearance for the broken-up area and virgin forestland involved in the Project including deposition of Net Present Value (NPV) and Compensatory Afforestation (CA) should be indicated. A copy of the forestry clearance should also be furnished.	Not Applicable. The proposed project area does not involve any Forest Land.	-
14	Implementation status of recognition of forest rights under the Scheduled Tribes and other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 should be indicated.	Not Applicable. The project doesn't attract Recognition of Forest Rights Act, 2006.	-
15	The vegetation in the RF / PF areas in the study area, with necessary details, should be given.	Nil within a 10Km radius. Kothankulam R.F. – 10.2 km (NW)	-
16	A study shall be got done to ascertain the impact of the Mining Project on wildlife of the study area and details furnished. Impact of the project on the wildlife in the surrounding and any other protected area and	Nil within a 10Km radius. Srivilliputhur Megamalai Tiger Reserve- 17.3km (NW)	-

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

	accordingly, detailed mitigative measures required, should be worked out with cost implications and submitted.		
17	Location of National Parks, Sanctuaries, Biosphere Reserves, Wildlife Corridors, Ramsar site Tiger/ Elephant Reserves/(existing as well as proposed), if any, within 10 km of the mine lease should be clearly indicated, supported by a location map duly authenticated by Chief Wildlife Warden. Necessary clearance, as may be applicable to such projects due to proximity of the ecologically sensitive areas as mentioned above, should be obtained from the Standing Committee of National Board of Wildlife and copy furnished.	Nil within a 10Km radius. Srivilliputhur Megamalai Tiger Reserve- 17.3km (NW)	-
18	A detailed biological study of the study area [core zone and buffer zone (10 km radius of the periphery of the mine lease)] shall be carried out. Details of flora and fauna, endangered, endemic and RET Species duly authenticated, separately for core and buffer zone should be furnished based on such primary field survey, clearly indicating the Schedule of the fauna present' In case of any scheduled fauna found in the study area. the necessary plan along with budgetary	Flora and fauna composition in the core and buffer zone of the project has been studied through primary field surveys. The details are furnished in section 3.7.7.1 of Chapter 3.	140

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

	provisions for their conservation should be prepared in consultation with State Forest and wildlife Department and details furnished. Necessary allocation of funds for implementing the same should be made as part of the project cost.		
19	Proximity to Areas declared as 'critically Polluted' or the project areas likely to come under the 'Aravali Range', (attracting court restrictions for mining operations), should also be indicated and where so required, clearance certifications from the prescribed Authorities. such as the SPCB or State Mining Department should be secured and furnished to the effect that the proposed mining activities could be considered.	Not Applicable	-
20	Similarly, for coastal projects, a CRZ map duly authenticated by one of the authorized agencies demarcating LTL. HTL, CRZ area, location of the mine lease with respect to CRZ, Coastal features such as mangroves, if any, should be furnished. (Note: The Mining projects falling under CRZ would also need to obtain approval of the concerned Coastal Zone Management Authority).	Not Applicable	-
21	R&R Plan/compensation details for the project Affected people (PAP) should be furnished. While preparing	The mining activities will be carried out within the mine lease area only. The entire mine lease	

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

	the R&R Plan, the relevant State/ National Rehabilitation & Resettlement policy should be kept in view. In respect of SCs /STs and other weaker sections of the society in the study area, a need based sample survey, family-wise, should be undertaken to assess their requirements, and action programmes prepared and submitted accordingly, integrating the sectoral programmes of line departments of the state Government. It may be clearly brought out whether the village(s) located in the mine lease area will be shifted or not. The issues relating to shifting of village(s) including their R&R and socio-economic aspects should be discussed in the Report.	area of 1.90.50 Ha is a Patta Land. There is no population within the ML area. Hence, the question of R& R does not arise.	
22	One season (non-monsoon) [i.e. March-May (Summer Season); October-December (post monsoon season); December-February (winter season)] primary baseline data on ambient air quality as per CPCB Notification of 2009, water quality, noise level, soil and flora and fauna shall be collected and the AAQ and other data so compiled presented date-wise in the EIA and EMP Report. Site-specific meteorological data should also be collected. The location of the	Baseline Data were collected for One Season (Non-Monsoon) March to May 2025 as per CPCB Notification and MoEFCC Guidelines and Detailed in Chapter - 3.	107

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

	monitoring stations should be such as to represent whole of the study area and justified keeping in view the pre-dominant downwind direction and location of sensitive receptors. There should be at least one monitoring station within 500 m of the mine lease in the pre-dominant downwind direction. The mineralogical composition of PM10, particularly for free silica, should be given.		
23	Air quality modeling should be carried out for prediction of impact of the project on the air quality of the area. It should also take into account the impact of movement of Vehicles for transportation of mineral. The details of the model used and input parameters used for modeling should be provided. The air quality contours may be shown on a location map clearly indicating the location of the site, location of sensitive receptors, if any, and the habitation. The wind roses showing pre-dominant wind direction may also be indicated on the map.	Modelling is done using AERMOD and the projected values are found to be within the norms. Hence, there is no major impact due to this mining project. The cumulative impact of mining is also studied and the same is found to be within norms. The details are given in section 4.8 of Chapter 4 and for cluster - 7.4.1 of Chapter 7.	210
24	The water requirement for the Project, its availability and source should be furnished. A detailed water balance should also be provided. Fresh water requirement for the Project should be indicated.	The entire water requirement for the project is 3.9 KLD which will be sourced from outside agencies. The water balance diagram is shown in Chapter 4	154

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

25	Necessary clearance from the Competent Authority for drawl of requisite quantity of water for the Project should be provided.	Not Applicable. The required water will be outsourced from the nearby village.	-
26	Description of water conservation measures proposed to be adopted in the Project should be given. Details of rainwater harvesting proposed in the Project, if any, should be provided.	Details of the water conservation plan are given in chapter 10. Rainwater harvesting plan are detailed in Chapter 4.	154 & 223
27	Impact of the Project on the water quality, both surface and groundwater, should be assessed and necessary safeguard measures, if any required, should be provided.	Impact Studies and Mitigation Measures of Water Environment including Surface Water and Ground Water are discussed in Section 4.2.3.	158
28	Based on actual monitored data, it may clearly be shown whether working will intersect groundwater. Necessary data and documentation in this regard may be provided. In case the working will intersect groundwater table, a detailed Hydro Geological Study should be undertaken and Report furnished. The Report inter-ali4 shall include details of the aquifers present and impact of mining activities on these aquifers. Necessary permission from Central Ground water Authority for working below ground water and for pumping of ground water should also be obtained and copy furnished.	As per the mining plan, the ground water table of the project surrounding area is 68.0 m BGL and proposed depth of the quarry operation is 45 m BGL. So, the proposed mine working will not intersect the ground water table.	-
29	Details of any stream, seasonal or otherwise, passing through the lease	Not Applicable	-

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

	area and modification / diversion proposed, if any, and the impact of the same on the hydrology should be brought out.	No stream passing through the mine lease area.		
30	Information on site elevation, working depth, groundwater table etc. Should be provided both in AMSL and bgl. A schematic diagram may also be provided for the same.	Altitude of the area	137 m from MSL	-
		Ultimate Depth	45 m BGL	
		Ground water	68 m BGL.	
31	A time bound Progressive Greenbelt Development Plan shall be prepared in a tabular form (indicating the linear and quantitative coverage, plant species and time frame) and submitted, keeping in mind, the same will have to be executed up front on commencement of the Project. Phase-wise plan of plantation and compensatory afforestation should be charted clearly indicating the area to be covered under plantation and the species to be planted. The details of plantation already done should be given. The plant species selected for green belt should have greater ecological value and should be of good utility value to the local population with emphasis on local and native species and the species which are tolerant to pollution.	Greenbelt Development Plan & Recommended Species proposed for Greenbelt Development are detailed in Section 4.4.5.4. 0.42.50 hectares of land are allotted for greenbelt development.		185
32	Impact on local transport infrastructure due to the Project should be indicated. Projected	The Traffic density survey was carried out to analyze the impact of transportation in the study		-

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

	increase in truck traffic as a result of the Project in the present road network (including those outside the Project area) should be worked out, indicating whether it is capable of handling the incremental load. Arrangement for improving the infrastructure, if contemplated (including action to be taken by other agencies such as State Government) should be covered. Project Proponent shall conduct Impact of Transportation study as per Indian Road Congress Guidelines.	area as per IRC guidelines 1961 and it is inferred that there is no significant impact due to the proposed transportation from the project area.	
33	Details of the onsite shelter and facilities to be provided to the mine workers should be included in the EIA Report.	Temporary Infrastructure & other facilities will be provided to the Mine Workers after the grant of quarry lease and the same has been discussed in Section 2.11.5 of Chapter 2.	106
34	Conceptual post mining land use and Reclamation and Restoration of mined out areas (with plans and with adequate number of sections) should be given in the EIA report.	At the conceptual stage the quarried-out land will be fenced and lower benches will be allowed to collect rain water to act as a temporary reservoir and Greenbelt development will be carried out on the top bench, unutilized areas and haul roads. Mine closure plan is detailed in Section 2.10 of Chapter 2.	103
35	Occupational Health impacts of the Project should be anticipated and the proposed preventive measures spelt out in detail. Details of pre-	Details of occupational health and safety aspects are given under the Section 4.4.7 & Section 10.4.	227 & 187

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

	placement medical examination and periodical medical examination schedules should be incorporated in the EMP. The project specific occupational health mitigation measures with required facilities proposed in the mining area may be detailed.		
36	Public health implications of the Project and related activities for the population in the impact zone should be systematically evaluated and the proposed remedial measures should be detailed along with budgetary allocations.	No major impact on public health will be there since the villages are located more than 1km from the lease area.	
37	Measures of socio-economic significance and influence to the local community proposed to be provided by the Project Proponent should be indicated. As far as possible, quantitative dimensions may be given with time frames for implementation.	This project provides employment to 28 people (16 Nos. Directly & 12 Nos. Indirectly). Local people will be hired for unskilled labour. Through CSR, nearby schools, hospitals will be benefitted. For CSR, INR 5.0 Lakh is allocated. Based on the demand of the people during public hearing, further funds will be allocated, if necessary.	-
38	Detailed Environmental Management Plan (EMP) to mitigate the environmental impacts which, should inter-alia include the impacts of change of land use, loss of agricultural and grazing land, if any, occupational health impacts besides	Environmental Management plan details are given in Chapter 10.	223

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

	other impacts specific to the proposed Project.		
39	Public Hearing points raised and commitment of the Project Proponent on the same along with time bound Action Plan with budgetary provisions to implement the same should be provided and also incorporated in the final EIA/EMP Report of the Project.	During public hearing process, the opinions and demands of the people will be noted. The replies and commitment made by the proponent along with time bound action plan wherever applicable will be provided in Final EIA/EMP report.	-
40	Details of litigation pending against the project, if any, with direction /order paced by any Court of Law against the Project should be given.	There is no litigation pending against the project.	-
41	The cost of the Project (capital cost and recurring cost) as well as the cost towards implementation of EMP should be clearly spelt out.	Project Cost is Rs. 136.15/- lakhs CER Cost is Rs.5.0/- lakhs EMP Cost Capital Cost is Rs. 9.18 Lakhs Recurring Cost is Rs. 26.04 Lakhs for Ten years.	-
42	A Disaster management Plan shall be prepared and included in the EIA/EMP Report.	Disaster management plan are provided under section 7.3 of Chapter 7.	199
43	Benefits of the Project if the Project is implemented should be spelt out. The benefits of the Project shall clearly indicate environmental, social, economic, employment potential, etc.	Detailed in Chapter 8.	221
44	Besides the above, the below mentioned general points are also to be followed.		
A	Executive Summary of the EIA/EMP Report	Yes, Complied.	-

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

B	All documents to be properly referenced with index and continuous page numbering.	Yes, Complied.	-
C	Where data are presented in the Report especially in Tables, the period in which the data were collected and the sources should be indicated.	Yes, Complied.	-
D	Project Proponent shall enclose all the analysis/testing reports of water, air, soil, noise etc. using the MoEF&CC/ NABL accredited laboratories. All the original analysis/testing reports should be available during appraisal of the Project,	Yes, Complied.	-
E	Where the documents provided are in a language other than English, an English translation should be provided.	Yes, Complied.	-
F	The Questionnaire for environmental appraisal of mining projects as devised earlier by the Ministry shall also be filled and submitted.	Yes, Complied.	-
G	While preparing the EIA report, the instructions for the Proponents and instructions for the Consultants issued by MoEF&CC vide O.M. No. J-I 1013/41/2006-IA.11 0) dated 4th August, 2009, which are available on the website of this Ministry, should be followed.	Noted & Agreed	-
H	Changes, if any made in the basic scope and project parameters (as	Yes, Complied.	-

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

	submitted in Form-I and the PFR for securing the TOR) should be brought to the attention of MoEF&CC with reasons for such changes and permission should be sought, as the ToR may also have to be altered. Post Public Hearing changes in structure and content of the draft EIA/EMP (other than modifications arising out of the P.H. process) will entail conducting the pH again with the revised documentation.		
I	As per the circular no. J-11011/1618/2010-IA.II (I) dated 30.5.2012, certified report of the status of compliance of the conditions stipulated in the Environment Clearance the existing operations of the project, should be obtained from the Regional office of Ministry of Environment, Forest and Climate Change, as may be applicable.	Yes, Complied.	-
J	The EIA report should also include (i) surface plan of the area indicating contours of main topographic features, drainage and mining area, (ii) geological maps and sections and (iii) sections of the mine pit and external dumps, if any, clearly showing the land features of the adjoining area.	Yes, Complied.	-

1.0 INTRODUCTION

1.1 PURPOSE OF THE REPORT

Environmental Impact Assessment (EIA) is the management tool to ensure the sustainable development and it is a process, used to identify the environmental, social and economic impacts of a project prior to decision making. It is a decision-making tool, which guides the decision makers in taking appropriate decisions for any project.

EIA systematically examines both beneficial and adverse consequences of the project and ensures that these impacts are taken into account during the project designing. It also reduces conflicts by promoting community participation, information, decision makers, and helps in developing the base for environmentally sound project.

Rough Stone & Gravel Quarry are the major requirements for construction industry. This EIA report is prepared by considering Cumulative load of all existing & proposed quarries located within 500 m radius of the project area.

Thiru.B.Kabildev proposes to operate Rough Stone & & Gravel Quarry over an extent of 1.90.50 Ha. Patta land in S.F.No. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State and ToR obtained vide TOR Identification No. TO25B0108TN5689908N, Dated: 25.07.2025 and the applied lease area is fresh new proposed Quarry.

This proposed project is categorized under category "B1" Activity 1(a) (mining lease area in cluster situation). This cluster includes the four existing quarries and two proposed quarries. The proposed quarries located within 500m radius are detailed in below Table 1.1.

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

Table -1.1 Cluster Mines Details

S.No	Name of the Quarry Owner	S.F. Nos & Village	Lease Status	Area in Ha
a. Existing Quarries:				
1.	S.Murugesan, No. 106/134, Madurai, Rajakadai Street, Rajapalayam	S.F.Nos. 635/4(P), 636 Gopalapuram Village	KV1/170/2019 Dt. 01.08.2020 26/08/2020 To 25/08/2025	2.89.0
2.	S.Murugesan, No. 106/134, Madurai, Rajakadai Street, Rajapalayam	S.F.No. 632(P) Gopalapuram Village	KV1/708/2021 Dt. 05.05.2025 05/05/2025 To 04/05/2030	1.25.0
3.	Thiru.P.Arumugam, M/s.Selvakumar Blue Metals	S.F.Nos. 567/2A, 567/2B, 568/1B Gopalapuram Village	KV1/159/2021 Dt. 01.02.2023 01/02/2023 To 31/01/2028	2.48.5
4.	Thiru.V.Rajmohan, M/s. Lakshmi Blue Metals, 540B, Gopalapuram Main Road, Nallamanaykenpatti (P)	S.F.Nos. 557/1, 558/1, 558/2, 559, 574, 557/2 Gopalapuram Village	KV1/232/2021 Dt. 31.01.2023 01/02/2023 To 31/01/2028	4.85.0
b. Abandoned Quarry				
1.	Government Quarry	S.F.No. 624 Gopalapuram Village	Prior to 2013	
c. Present Proposed Quarry				
1.	Thiru.S.Shanmugavel, S/o. Subbaiah 300, D5/2, Sangaran Kovil Road, Rajapalayam	S.F.Nos. 586/11, 586/12, 586/13 Gopalapuram Village	KV1/1029/2023	2.12.50

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

2.	Thiru.B.Kabildev, S/o. Baskaran, No.125/2, Teachers Colony, .R Nagar (Post), Puthupalayam, Rajapalayam Taluk, Virudhunagar District.	S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F Gopalapuram Village	KV1/1216/2024	1.90.50
Total Area of Cluster			15.50.5 Ha	

As such Common EIA for the 6 projects falling in the cluster with assessment of impacts and EMP separately is carried out. Cluster area calculated as per MoEFCC Notification S.O. 2269(E) Dated 1st July 2016. Satellite image of Quarries in Cluster is shown in Fig 1.1.

As per MoEFCC OM: F.No. L-11011/175/2018-IA-II(M), dated 12.12.2018, the common EIA/EMP report has to be prepared for the cluster area based on ToR recommended by SEIAA. Therefore, the applicant applied for ToR through Parivesh website vide online proposal No. SIA/TN/MIN/541636/2025, Dated: 17.06.2025. The ToR proposal was placed in 585th SEAC-II meeting held on 03.07.2025 and 856th SEIAA meeting held on 21.07.2025. Then ToR has been issued by the SEIAA vide TOR Identification No. TO25B0108TN5689908N, Dated: 25.07.2025 to prepare the EIA report as per the recommended ToR for conducting Public hearing and obtaining Environmental Clearance from the SEIAA.

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

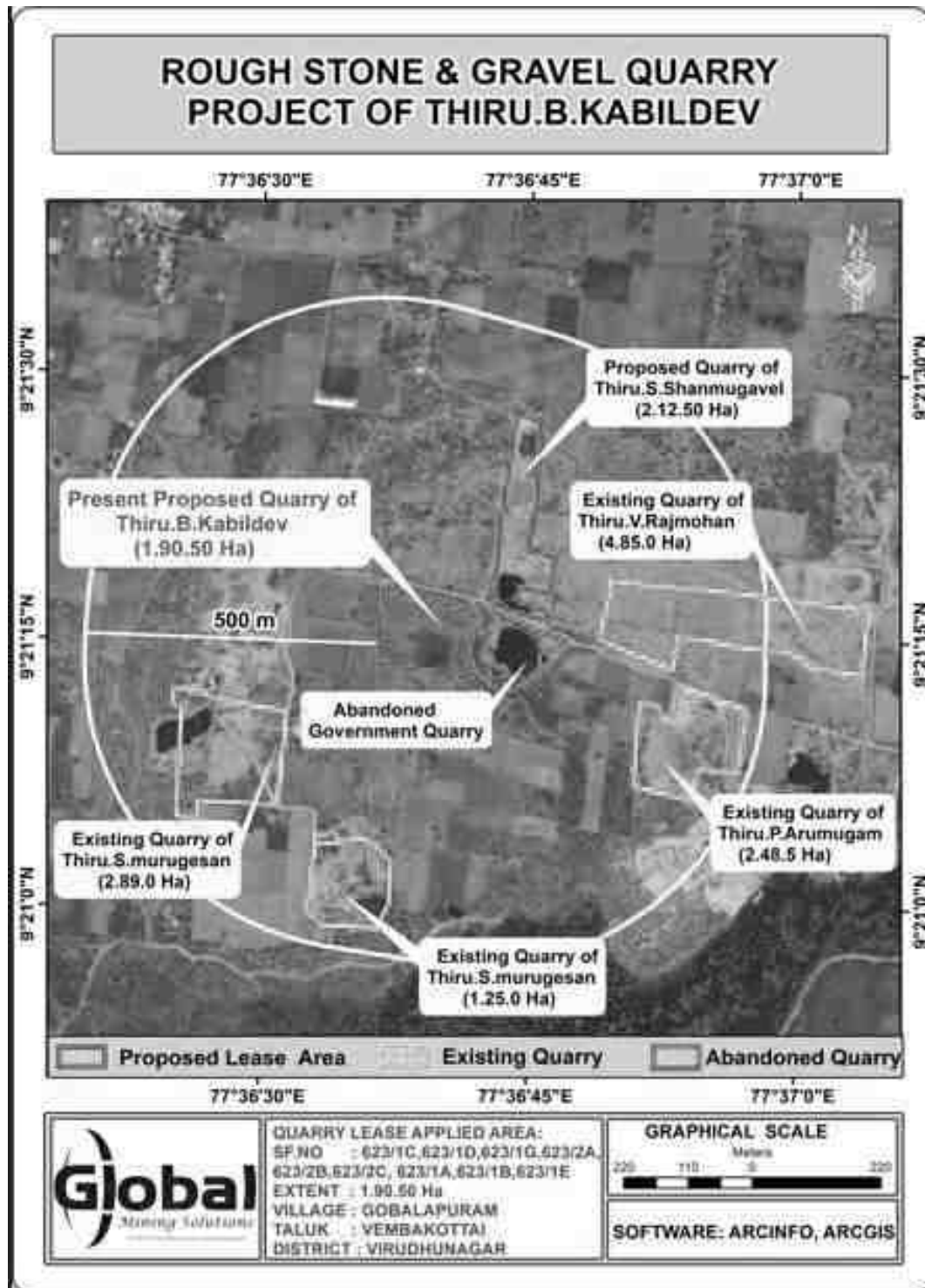


Figure1.1 Satellite Image showing cluster quarries

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

1.2 IDENTIFICATION OF PROJECT AND PROJECT PROPONENT

1.2.1 IDENTIFICATION OF PROJECT

Table -1.2 Project Identification

Name of the Project	Proposed Rough Stone & Gravel Quarry of Thiru. B. Kabildev S/o. Baskaran
S.F No.	S.F.No. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F
Location of the Project	Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State
Extent	1.90.50 Ha
Type of Land	Patta Land

1.2.2 IDENTIFICATION OF PROJECT PROPONENT

Table -1.3- Details of Project PropONENT

Name of the Project PropONENT	Thiru. B. Kabildev S/o. Baskaran
Communication address	Thiru. B. Kabildev S/o. Baskaran, No.125/2, Teachers Colony, K.R Nagar (Post), Puthupalayam, Rajapalayam Taluk, Virudhunagar District, TAMIL NADU- 626 108.
Mail id	kapildev1819@gmail.com
Mobile No.	9787569896

1.3 BRIEF DESCRIPTION OF THE PROJECT

1.3.1 NATURE AND SIZE OF THE PROJECT

The quarrying operation is proposed to be carried out by Opencast Mechanized Mining Method by jack hammer drilling, slurry blasting by forming 5.0 m bench height and 5.0 m bench width. Excavator and tippers are proposed for Loading and transportation. Table 1.4 shows the Brief Descriptions of the Project.

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

Table – 1.4 Brief Descriptions of the Project

Name of the Quarry	Thiru. B. Kabildev S/o. Baskaran, Rough Stone & Gravel Quarry		
Toposheet No	58-G/11		
Latitude between	09°21'12.93"N to 09°21'17.96"N		
Longitude between	77°36'36.59"E to 77°36'42.09"E		
Land Classification	The proposed land is a patta land in the name of Thiru.B.Kabildev (applicant) vide patta Nos. 2440 and 2450. The copy of the Patta, Adangal and A-Register are enclosed as Annexure - 6.		
Altitude of the area	137 m (MSL)		
Proposed Depth of Mining	45 m BGL		
Geological Resources	7,61,600 m ³ of Rough Stone and 95,200 m ³ of Gravel		
Mineable Reserves	2,44,440 m ³ of Rough Stone and 72,930 m ³ of Gravel		
Proposed Production	2,44,440 m ³ of Rough Stone and 72,930 m ³ of Gravel for 10 years		
Ultimate pit Depth	45m (below ground level)		
Water Level in the area	68 m bgl		
Method of Mining	Opencast method of Semi Mechanized Mining including blasting and drilling		
Topography	The area applied for quarry lease is exhibits almost plain covered by Gravel formation. The massive Charnockite formation is noticed below 5m (Avg) Gravel formation and sloping towards southeastern side of the area, the altitude of the area is above 137m (maximum) from MSL.		
Machinery Proposed	Jack Hammer	3 Nos.	32mm Dia
	Compressor	1 No	-
	Excavator	2 Nos.	0.9 Cu.m
	Tipper	4 Nos	5/10 T
Proposed Manpower Development	Permanent: 16 Nos., Temporary: 12 Nos.		
Water Requirement	3.9 KLD		

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

	a) Drinking & Domestic – 1.2 KLD b) Dust suppression – 1.5 KLD c) Greenbelt – 1.2 KLD
Greenbelt Development	The safety zone of 0.42.50 ha will be developed with about 430 nos of plantation.
Fuel Requirement	2,07,707 Litres of HSD (Entire Project Life)
Project Cost	136.15 Lakhs (Including operational + Fixed Asset + EMP cost + CER cost).
EMP Cost	Rs. 35.22 Lakhs
CER Cost	Rs.5.0 Lakhs will be spent as CER Cost.

1.3.2 NATURE OF THE PROJECT

Sector	1(a) Non-Coal Mining
Type	Fresh Project
Category	B1 (Cluster Situation)
Mineral	Minor mineral of Rough Stone

1.3.3 LOCATION OF PROJECT

The proposed Quarry lease area is situated at S.F.No. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State. The area lies in the north Latitude: 09°21'12.93"N to 09°21'17.96"N eastern Longitude: 77°36'36.59"E to 77°36'42.09"E. Location of the proposed project is shown in Figure 2.1 and the satellite imagery of the project site is shown in Figure 2.2.

1.4 IMPORTANCE OF THE PROJECT TO THE REGION

Rough stone & Gravel Quarry will continue to be a staple in construction, decoration and industry for years to come. As recycling picks up, mining and quarries may slow down, but we will always need rough stone & Gravel Quarry in general construction and industry.

1.5 REGULATORY COMPLIANCES

Understanding of the applicable environmental legislative framework is crucial for understanding the scope of the EIA study. With respect to prevention and control of environmental pollution, the following Acts and Rules of MoEFCC (Ministry of Environment Forests and Climate Change), GoI (Government of India) govern the proposed project. The applicable environmental legislation for the proposed mining project is detailed below,

- Environment protection Act, 1986
- EIA Notification, 2006 & Subsequent amendments
- Water Pollution (Prevention & Control) Act, 1974
- Air Pollution (Prevention & Control) Act, 1981
- Noise Pollution (Regulation & Control) Rules, 2000
- Mines Act, 1952
- Tamil Nadu Minor Mineral Concession Rules, 1959
- Mines and Minerals (development and regulation) Act, 1957
- Minor Minerals Conservation and Development Amendment Rules 2018
- State Minor Mineral Concession Rules (GMMCR), 2017
- Explosive Act, 1884
- Explosive Rules, 2008
- Hazardous and other Wastes (management and Transboundary Movement) Rules, 2016
- Batteries (Management and Handling) Rules 2010
- Solid Waste Management Rule 2016

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

1.5.1 PRESENT LEGAL STATUS

Table 1.5 – Present Legal Status

Description	Issuing Authority	Status	Letter number	Date	Reference
Precise Area Communication	District Collector, Virudhunagar	Received	Rc.No.KV1/1216/2024	16.05.2025	Annexure - 2
Mine Plan Approval Letter	Assistant Director, Dept. of Geology and Mining, Virudhunagar	Approved	Roc.No.KV1/1216/2024,	09.06.2025	Annexure-3
District Survey Report	Collector, Assistant Director, Geology & Mining Virudhunagar	Authenticated	As per S.O. 3611(E) dated 25.07.2018.	-	-
500m radius Cluster Letter	Assistant Director, Geology & Mining, Virudhunagar	Obtained	Roc.No.KV1/1216/2024,	09.06.2025	Annexure-4
VAO NOC for features within 300m radius	VAO, Gopalapuram Village	obtained	-	02.06.2025	Annexure-5

1.5.2 SCREENING

As per the Environmental Impact Assessment (EIA) Notification dated 14th September 2006 and its subsequent amendments the proposed quarry mining project falls under 'Category B1(Cluster Situation)', which requires Environmental Clearance from the State Environmental Impact Assessment Authority (SEIAA). The project proponent has appointed M/s. Global Mining Solutions, Salem, who are accredited by the National Accreditation Board for Education and Training (NABET), Quality Council of India (QCI), New Delhi, under the registration number NABET/EIA/23-26/SA 0241. Their role is to carry out an Environmental Impact Assessment (EIA) and Environmental Management Plan (EMP) study in compliance with the Ministry of Environment, Forest and Climate Change (MoEFCC) requirements.

1.5.3 SCOPE OF THE STUDY

In line with the prescribed Terms of Reference (TOR), the area comprising 10 km radius around the proposed mine lease boundary is considered as the study area. The EIA/EMP report has been prepared following the generic structure specified in the EIA Notification 2006. The detailed studies have been conducted as per prescribed Standard TOR issued by SEIAA, Tamil Nadu vide TOR Identification No. TO25B0108TN5689908N Dated: 25.07.2025. The point wise compliance for the ToR has been incorporated in this EIA/EMP report.

The main scope of the EIA study is to quantify the cumulative impact in the study area due to cluster quarries and formulate the effective mitigation measures for this applied project area. A detailed account of the emission sources, emissions control equipment, background Air quality levels, Meteorological measurements, Dispersion model and all other aspects of pollution like effluent discharge, Dust generation etc., have been discussed in this report. The baseline monitoring study has been carried out during the Period of March to May 2025 for various environmental components so as to assess the anticipated impacts due the cluster

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

quarry projects on the environment and suggest suitable mitigation measures for likely adverse impacts due to this proposed project.

The scope of study broadly covered as below,

- ♦ Literature review and collection of secondary data relevant to the study area.
- ♦ Establish the baseline environmental aspects in and around the proposed project covering 10 km radius.
- ♦ Identify various existing pollution loads due to various mining activities.
- ♦ Predict incremental levels of pollutants in the study area due to the proposed operations.
- ♦ Establishing and analyzing demographic profile including sex ratio, literacy rate, SC/ST, workers classification, land use categorization, etc in the project influenced area
- ♦ Evaluate the predicted impacts on various environmental attributes in the study area by using scientifically developed and widely accepted environmental impact assessment methodologies.
- ♦ Prepare an Environment Management Plan (EMP) outlining the measures for improving the environmental quality and identify critical environmental attributes that are required to be monitored in the post-project scenario.
- ♦ To assess the impacts on human settlement in the project influence area Socio-Economic Assessment
- ♦ Cumulative impact assessment for the quarries in cluster.

1.6 NEED AND JUSTIFICATION OF THE PROJECT

- ♦ Proposed mining project will fulfill the local market requirement for real estate and infrastructure industry. This project will also provide employment to local people helping them earn livelihood.

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

- ♦ Employment generated consequent to the mining activity in the project will benefit local and rural population and will have multiplier effects on local economy.
- ♦ The Project will give tremendous boosts to the local and regional economy benefiting the population.
- ♦ The social benefits arising out of this proposal can be expressed in terms of increase in the standards of living of local population, educational opportunities, training and development of skills etc.

1.7 STRUCTURE OF THE REPORT

As per the new guidelines of the MoEFCC the report has been divided into the following chapters and presented as follows:

1. Introduction

This chapter describes the profile of the project proponent, name and contact address with email, project consultants, the purpose of the project, brief description of the project, applicable environmental regulations, objectives and methodology for EIA studies etc.

2. Project Description

This chapter gives a brief description of the project such as the type of project, need for the project, its location, approachability, layout, etc of the proposed project, the project implementation schedule, estimated cost of development etc

3. Description of the Environment

This chapter presents details of the baseline environmental status for microclimate, air quality, noise, water quality (surface and ground), soil quality, flora, fauna and socioeconomic status etc.

4. Anticipated Environmental Impacts & Mitigation Measures

This chapter discusses the possible sources of pollution and environmental impacts due to the project during operation phases and suggests the mitigation measures.

5. Analysis of Alternatives (Site and Technology)

This chapter discusses the analysis of the various alternatives for the technology as well as the site and gives the selection of the most feasible alternative.

6. Environmental Monitoring Program

This chapter discusses the details about the environmental monitoring program during operation phases. The technical aspects of monitoring the effectiveness of mitigation measures are covered in this chapter.

7. Additional Studies

This chapter covers information about the additional studies conducted for this project such as the Risk Analysis, Emergency Response and Disaster Management Plan.

8. Project Benefits

This chapter presents the benefits from this project

9. Environmental Management Plan

This chapter deals with the EM for the proposed sand mining projects and indicates the measures proposed to minimize the likely impacts on the environment during and operation phases and budgetary allocation for the same.

10. Summary and Conclusion

This chapter deals with the overall justification for implementation of the project and explanation of how, adverse effects have been mitigated.

11. Disclosure of Consultant

This chapter deals with the details of consultants engaged and the NABET accreditation details of environmental consultants.

2.0 PROJECT DESCRIPTION

2.1 TYPE OF THE PROJECT

The proposed activity is the extraction of Rough Stone and Gravel Quarry by open cast mechanized mining method.

This project proposed to produce 22,44,440 m³ of Rough Stone (207960 m³ for first five Years and 36480 m³ for next five Years) and 72,930 m³ of Gravel for the period of Ten years with ultimate depth up to 45 m.

2.2 NEED FOR THE PROJECT

Rough stone & Gravel Quarry is one of the important materials for the building construction. The rough stone & Gravel Quarry is used as both as coarse aggregate and fine aggregate after the proper sizing of stone. The coarse and fine aggregate are essential for preparing concrete which is used in foundation, beam, column, roof slab work of the buildings. The infrastructure is the sign of development of nation. So, it is very need to excavate the rough stone & Gravel Quarry for economic and infrastructure development of our Nation.

2.3 LOCATION OF THE PROJECT

Rough Stone & Gravel Quarry is located in Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State. The area lies in the north Latitude: 09°21'12.93"N to 09°21'17.96"N eastern Longitude: 77°36'36.59"E to 77°36'42.09"E and Toposheet number 58-G/11. Location of the proposed project is shown in Figure 2.1 the satellite imagery of the project site is shown in Figure 2.2 and the Table 2.1 shows the Boundary Coordinates of the Project. Figure 2.3 to Figure 2.5 indicates the Lease Plan, Village Map and Site Photographs.

This proposed project area is classified as Patta land, registered in the name of applicant vide patta no. 2440 and 2450. The M.L area details are presented in below Table 2.2 and Table 2.3 shows the Site Connectivity.

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

Table 2.1 Boundary Coordinates of the Project

Corners	Co- ordinates	
	Latitude	Longitude
1	09° 21' 13.79"N	77° 36' 36.59"E
2	09° 21' 15.75"N	77° 36' 36.70"E
3	09° 21' 17.96"N	77° 36' 36.97"E
4	09° 21' 16.60"N	77° 36' 41.94"E
5	09° 21' 16.27"N	77° 36' 42.09"E
6	09° 21' 15.49"N	77° 36' 41.99"E
7	09° 21' 14.65"N	77° 36' 41.65"E
8	09° 21' 12.93"N	77° 36' 42.04"E
9	09° 21' 13.31"N	77° 36' 39.85"E

Table 2.2 Mine Lease Area and its Ownership

Location	S.F. No	Area in Ha	Name of the owner	Govt land	Remarks
Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State	S.F.No. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F	1.90.50	Patta Land	No	It is Patta land and registered in the name of applicant vide patta no. 2440 and 2450.
Total	-	1.90.50	-	-	

Table 2.3 Site Connectivity

Nearest Roadway	The project site is approachable from Kuruchiarpatti – Mettuvadakarai village road on southeast side of the area. (SH-41) Tirunelveli – Rajapalayam Road - 5.4 km (W) (NH-744) Tenkasi – Tirumangalam Road - 11.7 km (NW)
Nearest Village	Kuruchiarpatti Village - 610m (NW)
Nearest Railway	Cholapuram RS - 4.36 km (W)
Nearest Airport	Madurai International Airport – 74.92 km (NE)

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

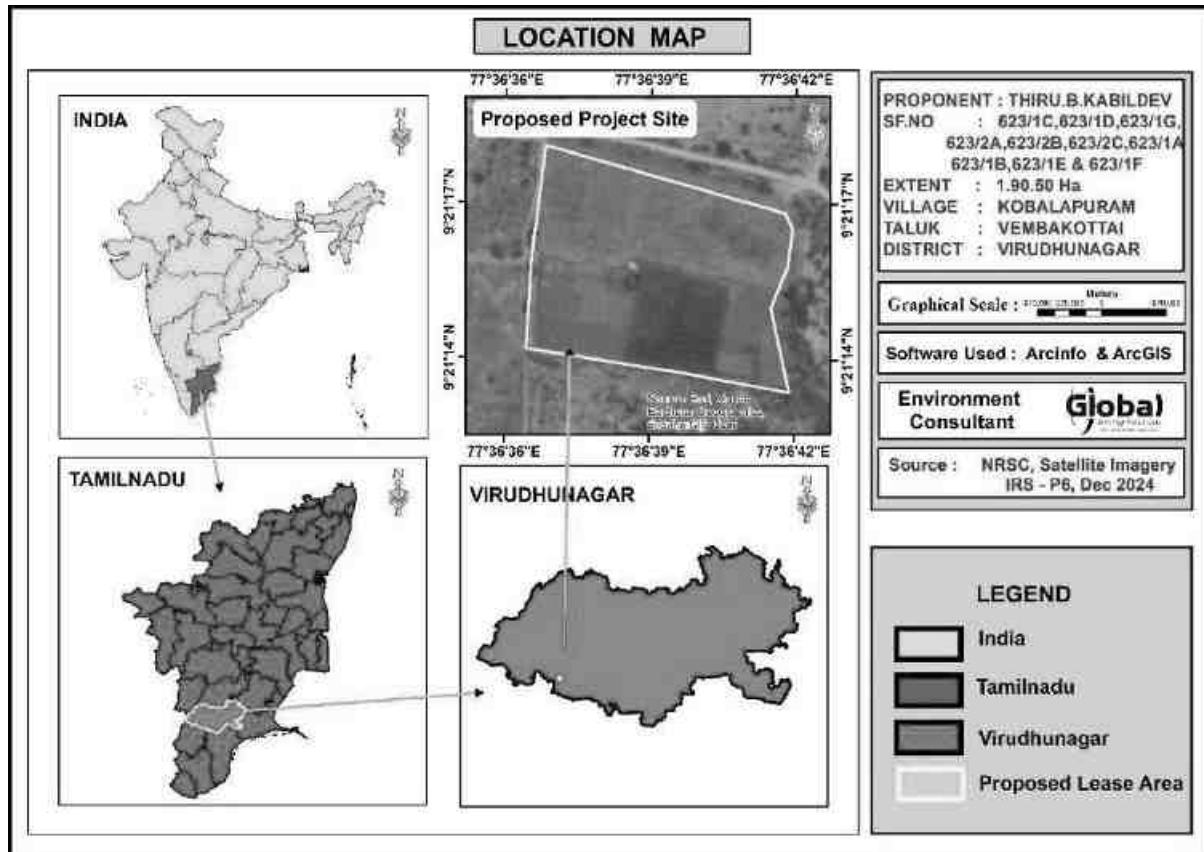


Figure 2.1 Location Map

ROUGH STONE & GRAVEL QUARRY PROJECT OF THIRU.B.KABILDEV

The map displays the proposed lease area for a rough stone and gravel quarry project. The area is bounded by a dashed line, with a solid line indicating the safety boundary. The map includes a legend, a graphical scale, and a table with project details.

Legend:

- Proposed Lease Area (dashed line)
- Safety Boundary (solid line)

Graphical Scale:

0 25 50 Meters

Table:

QUARRY LEASE APPLIED AREA:
SF.NO : 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E
EXTENT : 1.90.50 Ha
VILLAGE : GOBALAPURAM
TALUK : VEMBAKOTTAI
DISTRICT : VIRUDHUNAGAR

Software: ARC/INFO, ARCGIS



DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

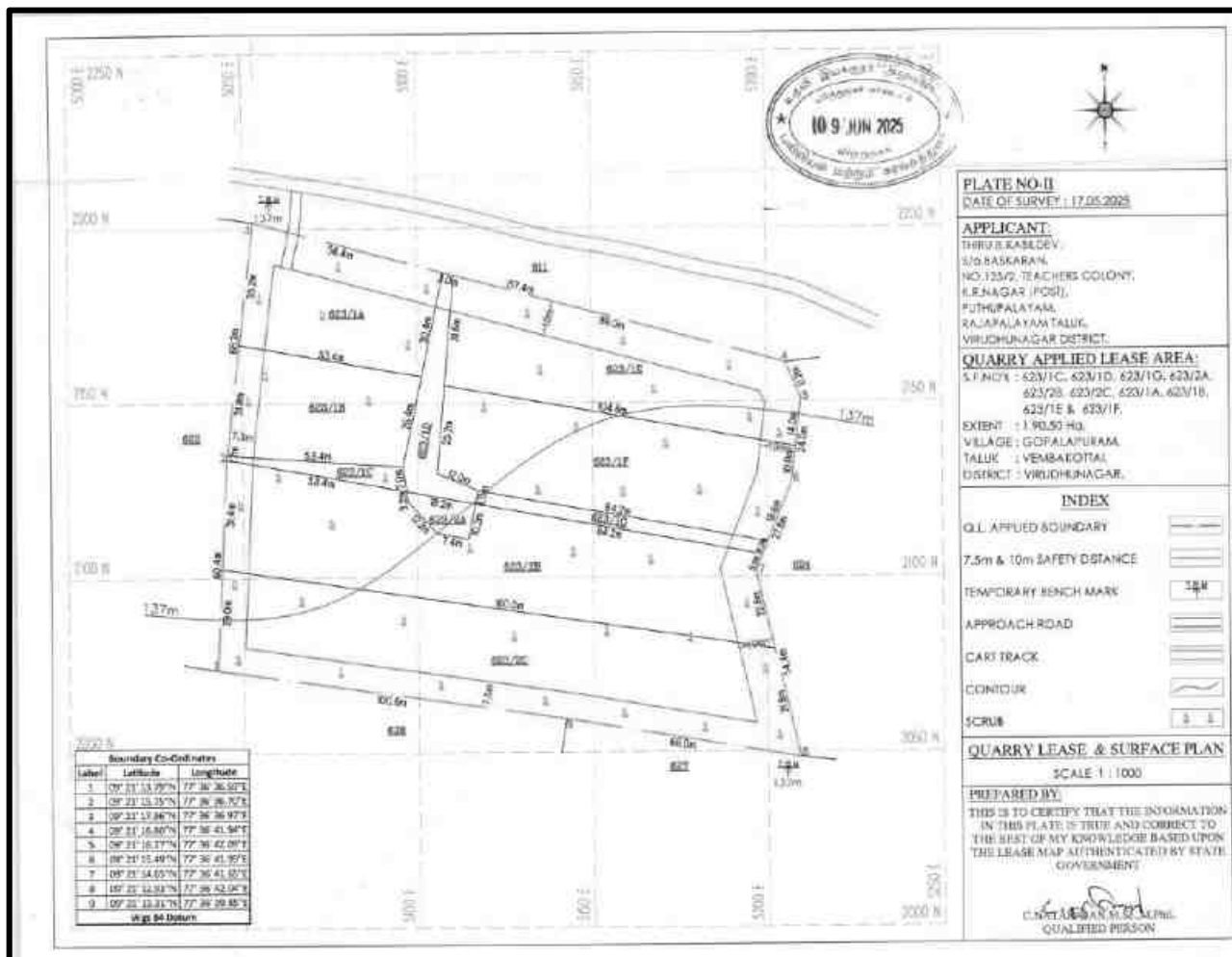


Figure 2.3 Lease Plan

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

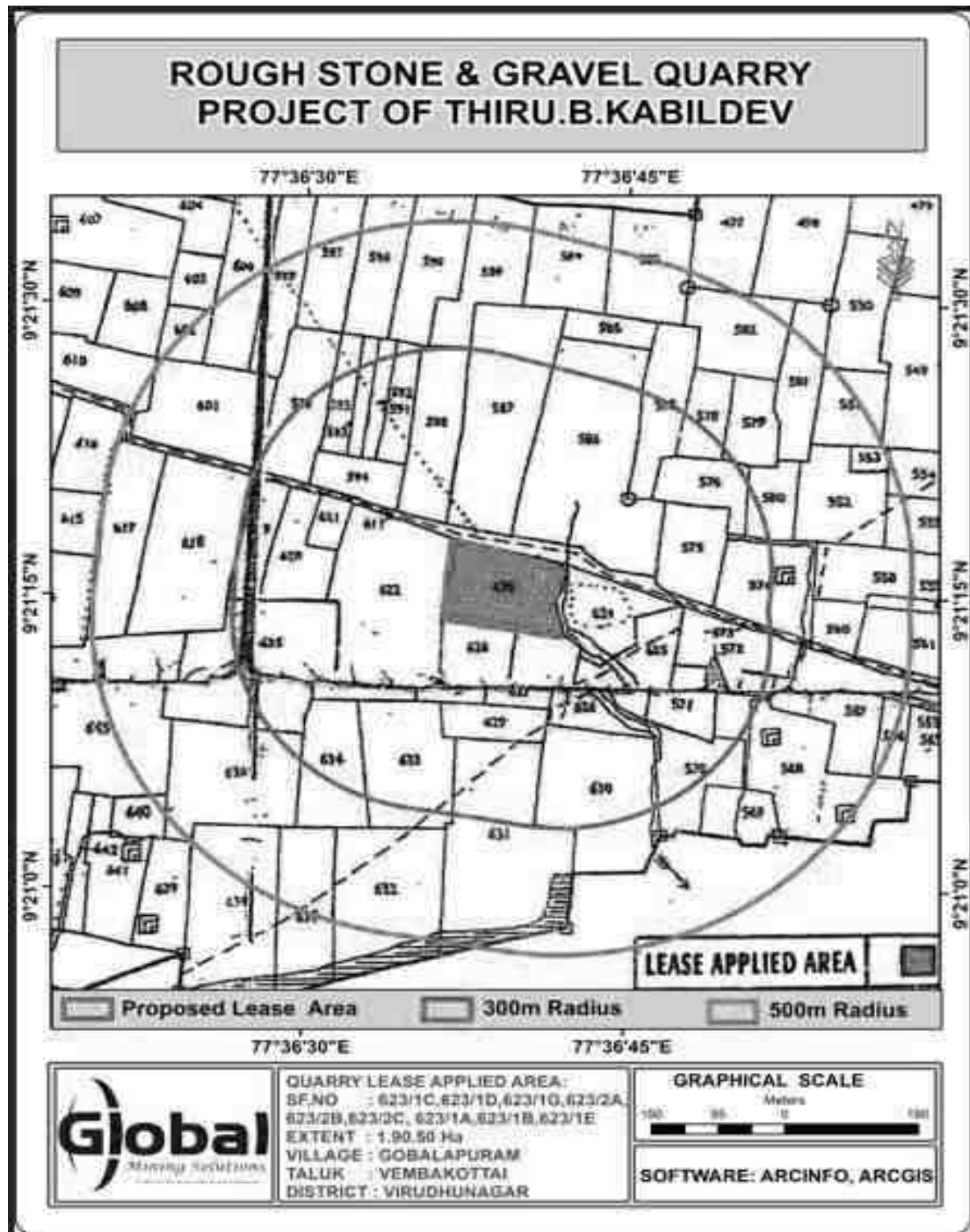


Figure 2.4 Village Map

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE



Figure 2.5 Site Photographs

2.4 LAND USE PATTERN OF THE PROJECT AREA

The entire project site is Patta land and registered in the name of applicant vide patta no 2440 and 2450. (Please refer Annexure 6). The land use pattern of the mine lease area as of today and conceptual stage given in Table No. 2.4.

Table 2.4 Land use pattern of the Project area

Sl. No	Land Use	Present Area (Ha)	Area in use during the quarrying period (Ha)
1.	Quarrying Pit	Nil	1.46.00
2.	Infrastructure	Nil	0.01.00
3.	Roads	Nil	0.01.00
4.	Green Belt	Nil	0.42.50
5.	Unutilized	1.90.50	Nil
Total		1.90.50	1.90.50

2.5 SIZE AND MAGNITUDE OF THE OPERATION

The proposed activity is the extraction of Rough Stone & Gravel Quarry by open cast mechanized mining method over an extent of 1.90.50 Ha and to produce 2,44,440 m³ of Rough Stone (207960 m³ for first five Years and 36480 m³ for next five Years) and 72,930 m³ of Gravel for the period of Ten years with ultimate depth upto 45 m. The details of geological and mineable reserves in the lease area have been provided below in the subsequent sub section.

2.6 TOPOGRAPHY AND DRAINAGE

The area applied for quarry lease is almost plain topography covered by Gravel formation. The massive Charnockite formation is noticed below 5 m (avg) Gravel and sloping towards southeastern side of the area, the altitude of the area is above 137 m (maximum) from MSL. No major river is found nearby the lease applied area.

2.7 GEOLOGY

2.7.1 REGIONAL GEOLOGY

The most of the area in Virudhunagar District is covered by a vast tract of black soil with residual hills and knolls. Since the area is covered by thick pediments, the geology of the area is studied in available exposure and quarry section opened up for limestone, dimension stone and blue metals for various purposes. The area exposes Khondalite Group of rocks and migmatite gneisses of Precambrian (V.R.Sowmi Narayanan, et al.,). The Khondalite Group of rocks comprises Charnockite, crystalline limestone/calc gneiss, garnetiferous quartzofeldspathic gneiss (leptynite), all these litho units probably represent a sequence of metamorphosed sedimentary units of arenaceous, calcareous and argillaceous composition with various intermixtures of different proportions (V.R.Sowmi Narayanan, et al.,). Granite and quartz veins form the younger intrusive.

2.7.2 LOCAL GEOLOGY

The area is underlain by the wide range of metamorphic rocks of peninsular gneissic complex. These rocks are extensively weathered and overlain by the recent valley fills and alluvium at places. The geological formations found in the district are Archaean rocks like Gneisses, Granites, Charnockites basic granulites and calc-gneisses. The younger formations are Quartz veins and pegmatite.

The rock type noticed in the area for lease is Charnockite which contains mostly Quartz and Feldspar with some ferromagnesian minerals. The Charnockite is part of peninsular Gneisses, a high-grade metamorphic rock.

The strike of the Charnockite formation is N45°E– S45°W with dipping towards SE 60°. The general geological succession of the area is given as under.

↑	AGE	ROCK TYPE
	Recent	- Gravelly soil
		Unconformity
	Archaean	- Dolerite dyke, Charnockite.
		Peninsular Gneissic complex and Calc Gneiss

2.8 RESOURCES AND RESERVES

The Resources and Reserves of Rough Stone & Gravel Quarry were calculated based on Cross-Section Method to cover the maximum lease area. The available Geological Resources details are given in the Table 2.5.

Table 2.5 Available Geological Resources

Section	Bench	Length in (m)	Width in (m)	Depth in (m)	Gravel in m3	Geological Resources in m3	Bulk Density	Gravel in Ts	Geological Resources of Rough stone in Ts
XY-AB	I	160	119	5	95200	-	2.00	190400	-
	II	160	119	5	-	95200	2.75	-	261800
	III	160	119	5	-	95200	2.75	-	261800
	IV	160	119	5	-	95200	2.75	-	261800

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

V	160	119	5	-	95200	2.75	-	261800
VI	160	119	5	-	95200	2.75	-	261800
VII	160	119	5	-	95200	2.75	-	261800
VIII	160	119	5	-	95200	2.75	-	261800
IX	160	119	5	-	95200	2.75	-	261800
Total					95200	761600	-	190400
								2094400

Gravel Formation : 1,90,400Ts

The Geological Resources of Rough stone : 20,94,400Ts

2.8.1 MINEABLE RESERVES

The mineable reserves are calculated by deducting 7.5 m and 10 m safety distance and bench loss. The available Mineable Reserves details are given in the Table 2.6.

Table 2.6 – Available Mineable Reserves

Section	Bench	Length in (m)	Width in (m)	Depth in (m)	Gravel in m ³	Mineable Reserves in m ³	Bulk Density	Gravel in (Ts)	Mineable Reserves in (Ts)
XY-AB	I	143	102	5	72930	-	2.00	145860	-
	II	133	92	5	-	61180	2.75	-	168245.00
	III	123	82	5	-	50430	2.75	-	138682.50
	IV	113	72	5	-	40680	2.75	-	111870.00
	V	103	62	5	-	31930	2.75	-	87807.50
	VI	93	52	5	-	24180	2.75	-	66495.00
	VII	83	42	5	-	17430	2.75	-	47932.50
	VIII	73	32	5	-	11680	2.75	-	32120.00
	IX	63	22	5	-	6930	2.75	-	19057.50
Total					72930	244440	-	145860	672210

The mineable reserve is computed as 6,72,210 Ts of Rough stone and 1,45,860 Ts of Gravel formation upto a depth 45m (below ground level) only.

2.9 PROCESS DESCRIPTION AND TECHNOLOGY

2.9.1 PROCESS DESCRIPTON

The quarry operation involves shallow jack hammer drilling, slurry blasting, excavation, Loading and transportation of Rough stone & Gravel Quarry to the

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

needy buyers. The production of Rough stone in this quarry involves the following method which is typical for Rough Stone & Gravel quarrying in contrast to other major mineral mining.

- Splitting of rock mass of considerable volume from the parent rock mass by jackhammer drilling and blasting, hydraulic excavators are used for loading the Rough Stone & Gravel Quarry from pithead to the needy buyers.
- Occasionally hydraulic excavators are attached with rock breakers for fragmentation to avoid secondary blasting.
- The primary boulders thus splitted are removed from the pits by excavators and further made to smaller sizes by rock breakers attached in excavators.

The process diagram is provided in Figure 2.6. The Geological and production plan and cross section for the 5 years period and conceptual plan is given in Figure No. 2.10 and Figure 2.7 indicates the Geological, Year wise Development & Production Plan & Sections.

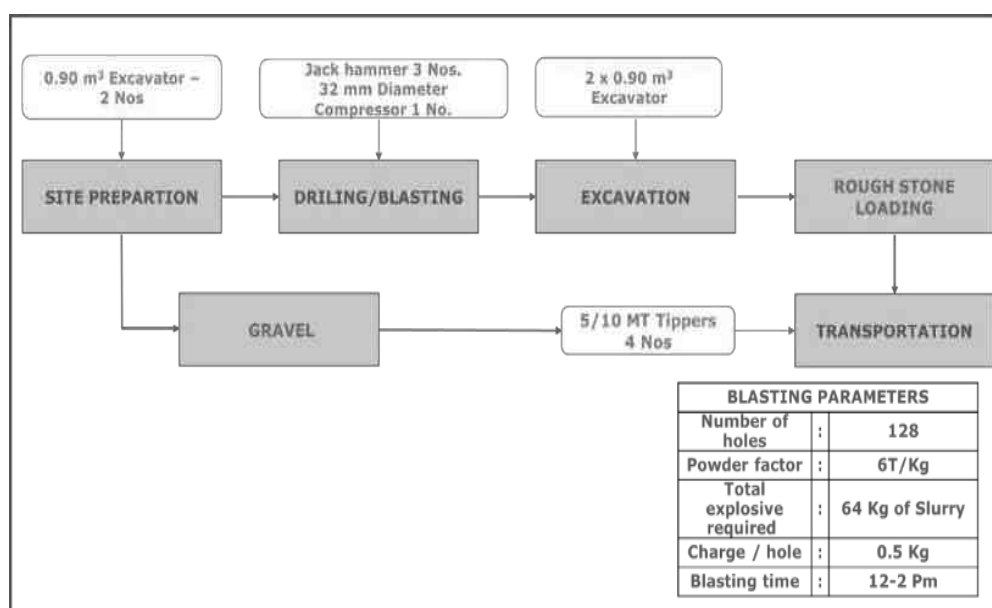


Figure 2.6 Process Flow Diagram

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

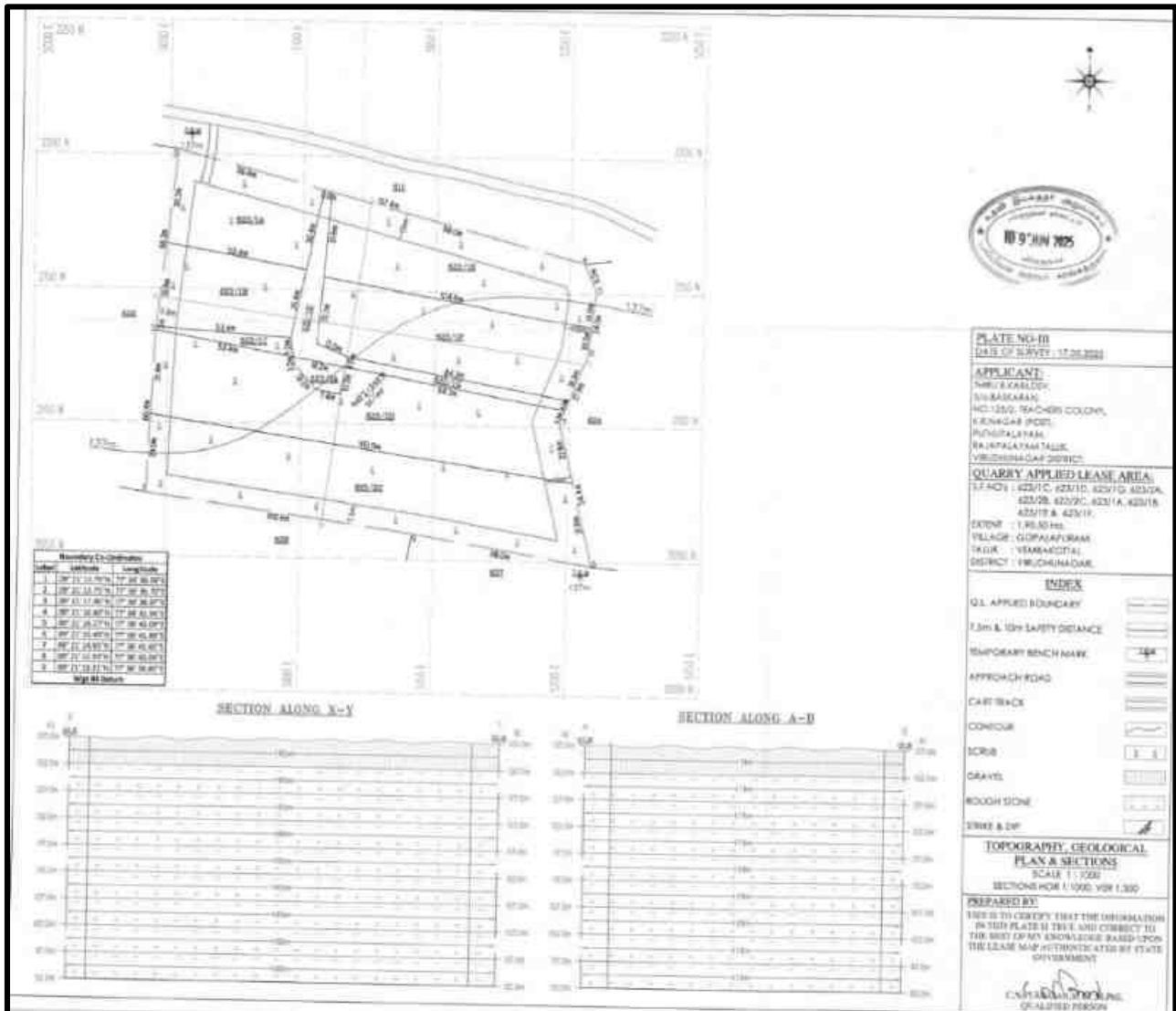


Figure 2.7 Topography, Geological Plan & Sections

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

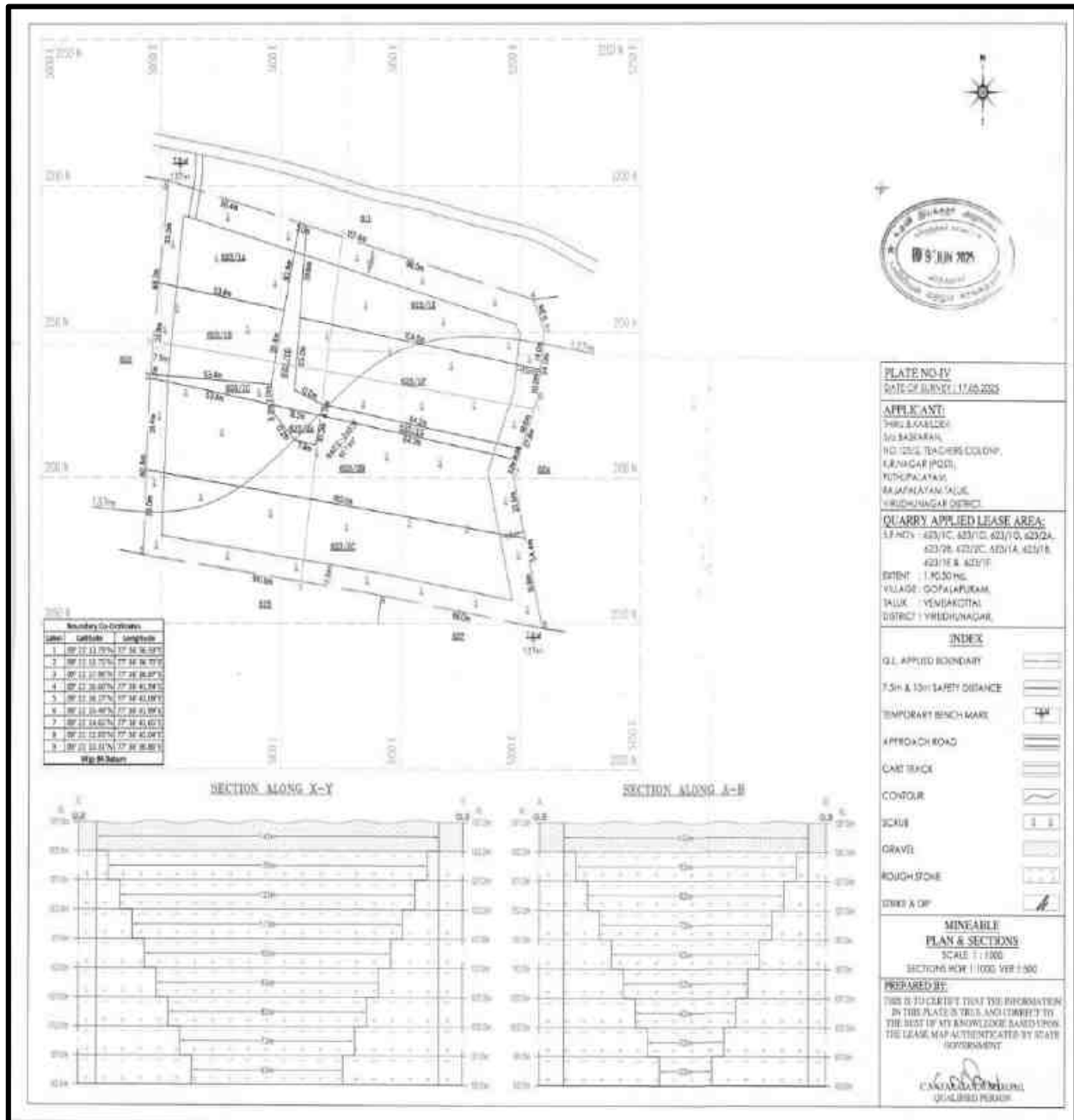


Figure 2.8 Mineable Plan & Sections

Table 2.7 – Machinery Details

S.NO	Name of the Equipment	Capacity	Requirement
1	Jack hammer	32 mm Dia	3
2	Compressor	-	1
3	Excavator	0.9 Cu.m	2
4	Tippers	5 / 10 Ts	4

2.9.2 TYPE OF EXPLOSIVE

Slurry explosive is proposed for shattering and heaving effect for removal of rough stone & Gravel Quarry. No deep hole drilling or primary blasting is proposed.

2.9.3 STORAGE OF EXPLOSIVES

No proposal for storage of explosives within the project area, the applicant will engage authorized explosive agency to carry out the blasting and it will be supervised by competent and statutory foreman / mines manager as per DGMS guidelines.

2.9.4 PRODUCTION SCHEDULE

The year wise production schedule upto lease period of first 5 years is discussed above, the year wise production and Mineable plan & section is given in Figure 2.8 & 2.9.

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

Year	Section	Bench	Length in (m)	Width in (m)	Depth in (m)	Gravel in m³	Mineable Reserves in m³	Bulk Density	Gravel in (Ts)	Mineable Reserves in (Ts)
I	XY-AB	I	38	102	5	19380	-	2.00	38760	-
		II	33	92	5	-	15180	2.75	-	41745.00
		III	28	82	5	-	11480	2.75	-	31570.00
		IV	23	72	5	-	8280	2.75	-	22770.00
		V	18	62	5	-	5580	2.75	-	15345.00
Total						19380	40520	-	38760	111430.00
II	XY-AB	I	27	102	5	13770	-	2.00	27540	-
		II	27	92	5	-	12420	2.75	-	34155.00
		III	27	82	5	-	11070	2.75	-	30442.50
		IV	27	72	5	-	9720	2.75	-	26730.00
		V	27	62	5	-	8370	2.75	-	23017.50
Total						13770	41580	-	27540	114345.00
III	XY-AB	I	27	102	5	13770	-	2.00	27540	-
		II	27	92	5	-	12420	2.75	-	34155.00
		III	27	82	5	-	11070	2.75	-	30442.50
		IV	27	72	5	-	9720	2.75	-	26730.00
		V	27	62	5	-	8370	2.75	-	23017.50
Total						13770	41580		27540	114345.00
IV	XY-AB	I	30	102	5	15300		2.00	30600	-
		II	30	92	5	-	13800	2.75	-	37950.00
		III	25	82	5	-	10250	2.75	-	28187.50
		IV	20	72	5	-	7200	2.75	-	19800.00
		V	15	62	5	-	4650	2.75	-	12787.50
		VI	23	52	5	-	5980	2.75	-	16445.00
Total						15300	41880	-	30600	115170.00
V	XY-AB	I	21	102	5	10710	-	2.00	21420	-
		VI	54	52	5	-	14040	2.75	-	38610.00
		VII	67	42	5	-	14070	2.75	-	38692.50
		VIII	57	32	5	-	9120	2.75	-	25080.00
		IX	47	22	5	-	5170	2.75	-	14217.50
Total						10710	42400	-	21420	116600.00
Grand Total						72930	207960	-	145860	571890.00

Table 2.8 Yearwise Production and Development

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

The applicant has proposed to carry out 5,71,890 Ts of Rough stone and 1,45,860 Ts of Gravel formation upto a depth of 45m (below ground level) for the period of first five years and remaining quantity of 1,00,320 Ts of Rough Stone will be proposed for the period of second five years. Mineable and Year wise plan section is shown in the Figure 2.8 & 2.9.

The proposed tentative yearwise production for 6th to 10th year is given below

Year	Section	Bench	Length in (m)	Width in (m)	Depth in (m)	Mineable Reserves in m³	Bulk Density	Mineable Reserves in (Ts)
VI	XY-AB	II	16	92	5	7360	2.75	20240
Total						7360	-	20240
VII	XY-AB	III	16	82	5	6560	2.75	18040
Total						6560	-	18040
VIII	XY-AB	IV	16	72	5	5760	2.75	15840
		V	10	62	5	3100	2.75	8525
Total						8860	-	24365
IX	XY-AB	V	6	62	5	1860	2.75	5115
		VI	16	52	5	4160	2.75	11440
		VII	8	42	5	1680	2.75	4620
Total						7700	-	21175
X	XY-AB	VII	8	42	5	1680	2.75	4620
		VIII	16	32	5	2560	2.75	7040
		IX	16	22	5	1760	2.75	4840
Total						6000	-	16500
Grand Total						36480	-	100320

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

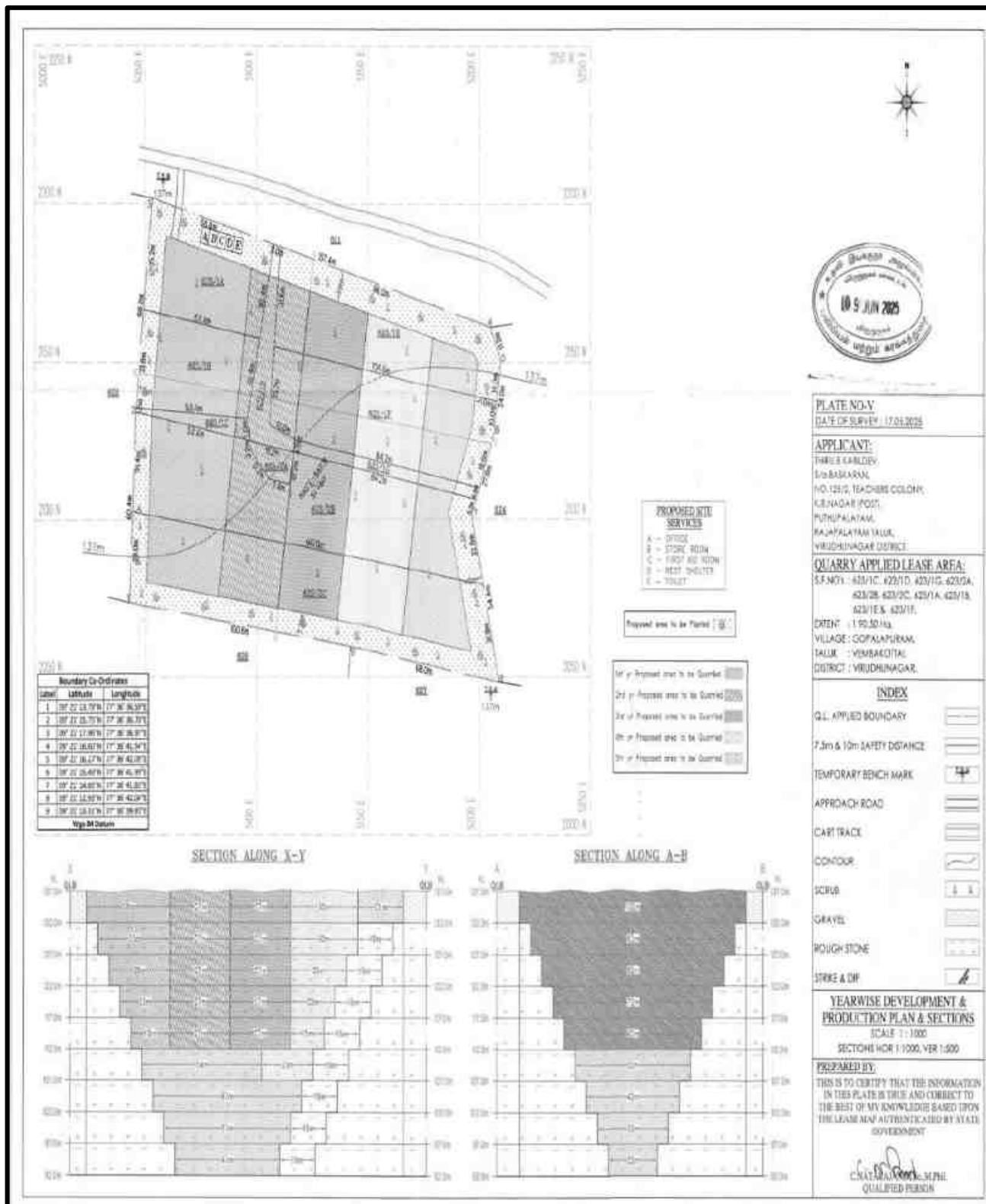


Figure 2.9 Yearwise Production Plan & Sections

2.9.5 DISPOSAL OF WASTE

There is no waste anticipated in this rough stone & Gravel Quarry. The entire quarried minerals will be utilized and also no topsoil generation from this proposal.

2.10 CONCEPTUAL MINING PLAN / FINAL MINE CLOSURE PLAN

Conceptual mining plan is prepared with an object of ten years of systematic development of bench layouts, selection of ultimate pit limit, depth of quarrying, ultimate pit slope, selection of sites for construction of infrastructure etc.

The ultimate pit size is designed based on certain practical parameters such as economical depth of mining, safety zones, permissible area, etc. Conceptual cross section and mine closure plan is given in Figure 2.10.

Table 2.9 - Ultimate Pit Dimension

Ultimate Pit dimension (M) end of First Five Years			
Pit No	Length (max) in (m)	Width (Avg) in (m)	Depth(max) in(m)
I	143	102	45m (below ground level)
Ultimate pit dimension End of the lease period			
Pit No	Length (max) in (m)	Width (Avg) in (m)	Depth(max) in(m)
I	143	102	45m (below ground level)

Land use pattern of the Project area

Sl. No	Land Use	Present Area (Ha)	Area in use during the quarrying period (Ha)
1.	Quarrying Pit	Nil	1.46.00
2.	Infrastructure	Nil	0.01.00
3.	Roads	Nil	0.01.00
4.	Green Belt	Nil	0.42.50
5.	Unutilized	1.90.50	Nil
Total		1.90.50	1.90.50

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

At the end of life of mine, the excavated mine pit / void of 1.46.0 Ha. will act as artificial reservoir for collecting rain water and helps to meet out the demand or crises during drought season.

After mine closure the greenbelt (0.42.50 Ha.) will be developed along the safety barrier and top benches and 0.02 ha are approach road and Infrastructure.

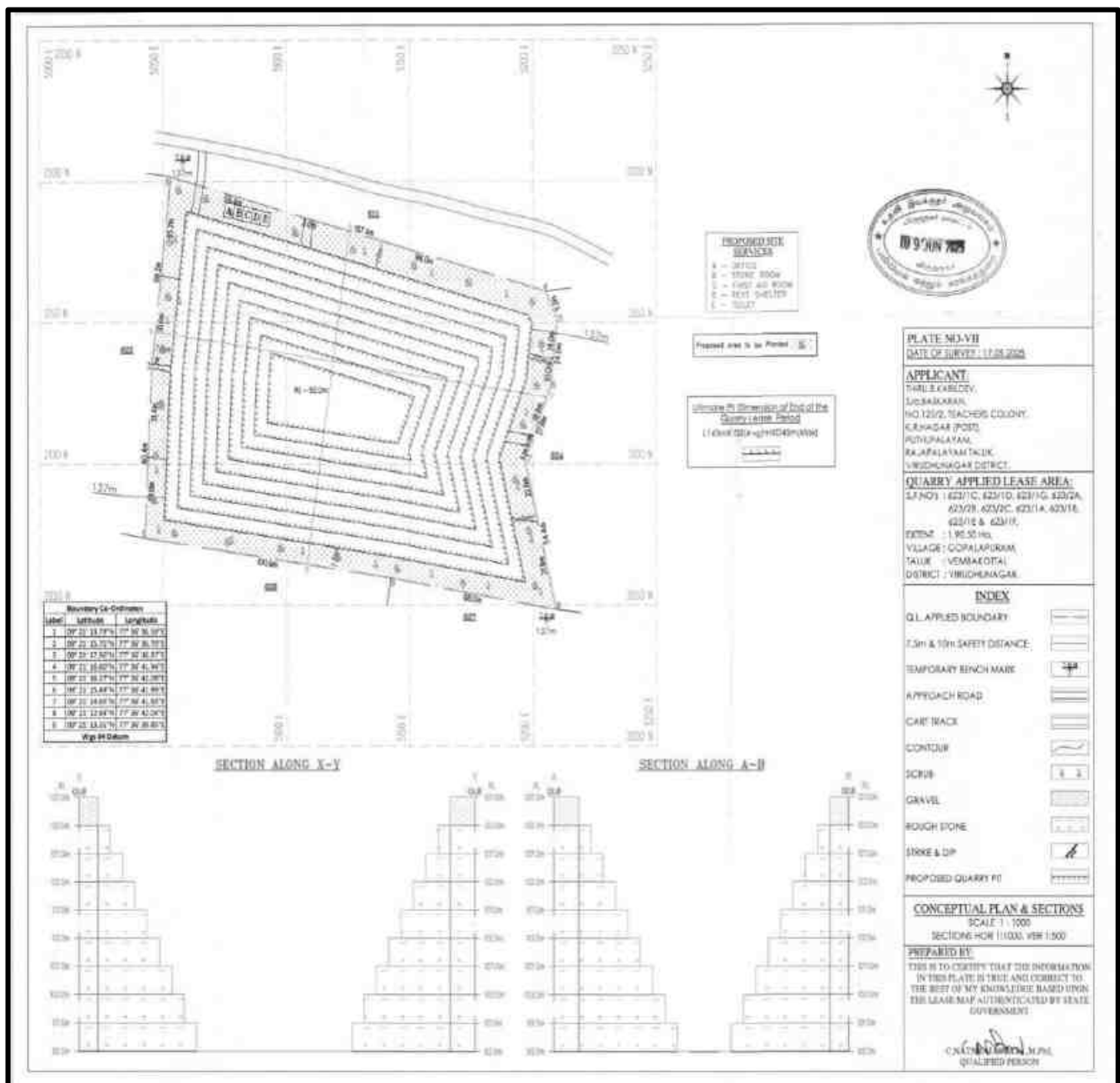


Figure 2.10 Conceptual Plan and Cross Section

2.11 PROJECT REQUIREMENT

2.11.1 WATER REQUIREMENT AND SOURCE

The total water requirement estimated for the quarry is 3.9 KLD. The required water will be procured from outside agencies initially and later rainwater harvested in the mine pit shall be used other than drinking purpose and the details of water requirement is given in the below Table 2.10.

Table 2.10 Details of Water requirement

Activity	Water Requirement in KLD
Drinking & Domestic	1.2 KLD
Dust Suppression	1.5 KLD
Greenbelt Development	1.2 KLD
Total	3.9 KLD

2.11.2 POWER REQUIREMENT

All the equipment will be diesel operated. No electricity is needed for mining operation. The minimum power requirement for office, etc will be met from state grid.

2.11.3 FUEL REQUIREMENT

High speed Diesel (HSD) will be used for mining machineries. The Total fuel consumption is around 2,07,707 litres of HSD for the entire period of life (10 years).

2.11.4 EMPLOYMENT GENERATION

The project will provide employment opportunities totally to 16 persons directly and 12 indirectly.

Skilled	Mines Manager	1 No.
	Foreman / Mate	2 No.
	Operator	8 No.
	Mechanic	1 No.
Semi-skilled	Driver	4 No.
Unskilled	Labours	12Nos
Total		28Nos

2.11.5 TRAFFIC DENSITY

The final product from the Quarry will be transported through Gopalapuram to Mettuvadakarai village road located at 1.47 km in eastern side of the project site.

Mineral Transportation

Table 2.11 Proposed Mineral Transportation		
Production Per day in tons		
Quarry	Total Mineral in tons per day	No. of Lorry Load per day
P1 (Proposed)	518	52
P2 (Existing)	325	33
P3 (Existing)	764	76
P4 (Existing)	738	74
P5 (Existing)	981	98
Total	3326	333

As four quarries already exist, they are part of the current traffic. The proposed project will bring 52 trips per day.

METHODOLOGY

Vehicle Count

The vehicles passing through the road (in both ways) were counted separately for 24 hours at the one selected location from 0600 hrs to 0600 hrs next day continuously. Category wise vehicle counting has been done continuously and recorded in the traffic volume count on hourly basis under respective categories.

Categorization of Traffic

The engine driven vehicles were categorized into various heads viz. two wheelers, three wheelers, four wheelers and trucks/bus.

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE



Figure 2.11 Mineral Transport Route

OPERATING CONDITION OF ROAD IN TERMS OF V/C AS PER INDIAN ROADS CONGRESS (IRC) 106 - 1990

Level of Service	General Operating conditions	Range of V/C
A	Free flow (traffic flows at or above speed limit and motorists have complete mobility between lanes)	<0.30
B	Reasonable flow (slightly more congested, with some maneuverability)	0.3 – 0.47
C	Stable flow (more congested than B, loads close to capacity)	0.48 – 0.68

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

D	Approaching unstable flow (speeds are somewhat reduced, example: busy corridor during middle of a weekday, or a functional urban highway during rush hour)	0.69 – 0.88
E	Unstable flow (flow becomes irregular, speed varies widely and rarely reaches speed limit)	0.88 - 1.00
F	Forced or breakdown flow (a constant traffic jam)	>1.00

Table 2.12 Existing Traffic Flow

Station Code	HMV		LMV		2/3 Wheelers		Total PCU
	No	PCU	No	PCU	NO	PCU	
1	65	195	52	52	181	90	337

PCU conversion factor: HMV (Trucks and Bus) = 3, LMV (Car, Jeep and Auto) = 1 and 2/3 Wheelers = 0.5

Table 2.13 – Mineral Hourly Transportation Requirement

Capacity of trucks	No Trips per day Cumulatively	Volume in PCU	PCU Per hour considering 8 HOURS
10 tones	52	156	19.5

Table 2.14 - Summary of Traffic Volume

Route	Existing Traffic Survey in PCU	Incremental Traffic Survey due to project	Total Traffic Survey Volume	Hourly capacity in PCU as per IRC -1960 guidelines
Gopalapuram to Mettuvadakarai village road	337	19.5	356.5	1500

- Due to this project the existing traffic volume will not exceed

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

- As per the IRC 1960 this existing village road can handle 1500 PCU in hour hence there will not be any conjunction due to this proposed transportation.

Table 2.15 - Modified Level of Service

Sampling Location	Existing Volume (PCU/hr)	Existing Volume/ Capacity ratio	Additional Volume (PCU/hr)	Modified Volume (PCU/hr)	Modified Volume/ Capacity ratio	Modified LOS
Gopalapuram to Mettuvadakarai village road	337	0.22	19.5	0.01	0.23	A*

(* A – Free Flow)

2.11.6 INFRASTRUCTURE REQUIREMENT

This is a proposed project. Site services like mine office, first aid room, toilets etc. will be provided as semi-permanent structures.

2.11.7 PROJECT COST

The total project cost of this rough stone Quarry is **Rs.136.15 Lakhs**.

2.11.8 PROJECT IMPLEMENTATION SCHEDULE

The proponent proposes to implement the production immediately after obtaining all the statutory approvals. The commercial operation will commence after the grant of Environmental Clearance. CTO and CTE will be obtained from the Tamil Nadu State Pollution Control Board. The conditions imposed during the Environmental Clearance will be compiled before the start of mining operation.

3.0 DESCRIPTION OF THE ENVIRONMENT

3.1 INTRODUCTION

As a precursor for the prediction of various types of environmental impacts likely to arise due to implementation of the project, it is essential to establish the baseline environmental setting of the project. Details of the baseline environmental parameters are required for decision making for the project design, implementation and operation from the environmental point of views. The data is to be generated through primary data collection (direct monitoring) and secondary sources (published data).

This chapter describes the environmental baseline data of core zone and surrounding areas of the project. The environmental baseline data includes the physical environment (comprising climate & meteorology, air, water, Noise and land components), biological environment and socio-economic environment, which may get affected due to the this proposed project.

3.2 STUDY AREA

The study area has been divided into two zones, namely, core and buffer zones. Core zone is considered as the total lease area of mine lease, while buffer zone encompasses an area of 10 km radius distance from the periphery of core zone. This chapter incorporates the description of existing environmental status in an area encompassed within 10 km radius from the boundary of mine lease. The environmental data for the following Environmental components were collected in the study area:

- Micro-meteorological monitoring in one of the representative locations.
- Ambient air quality study comprising gaseous, particulate matter at 6 different locations.

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

- Water quality analysis in 8 different locations (6 Ground Water + 2 Surface Water)
- Noise levels monitoring in 6 different locations
- Soil quality analysis in 6 locations.
- Flora & Fauna status.
- Land use & Land Cover.
- Socio-economic survey.

3.3 STUDY PERIOD

The above-mentioned studies have been carried out systematically and meticulously as per relevant IS codes, CPCB, MoEFCC guidelines during March to May 2025.

3.4 MONITORING LAB

The baseline information for air, water, noise, and soil was analysed by M/s. Shrient Analytical and Research Labs Pvt Ltd, # 416/15, Dharga Road, Perungalathur, West Tambaram, Chennai – 600 045. (Accredited by NABL as ISO/IEC/17025:2017) between March to May 2025.

3.5 ENUMERATION OF THE STRUCTURES LOCATED WITHIN 300 M RADIUS FROM THE PROPOSED QUARRY SITE

A Site survey has been conducted to identify and list structures located within a 300 m radius from the proposed Quarry. The details structures and photographs located within 300 m radius are given in below Table 3.1 and Figure 3.1 & 3.2.

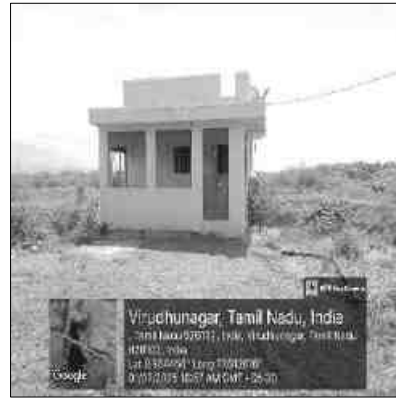
DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

Table 3.1 Structures within 300 m radius

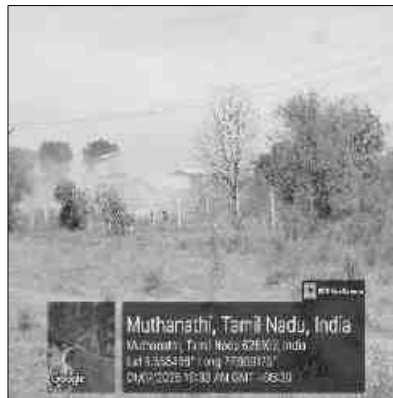
S. No	Name of the Structure	Distance and Direction	Ownership	Occupant	Type	Age
S1	Abandoned hut	115m (E)	Not Belongs to the PP	-	Straw	1 year
S2	Motor Room	109m (E)		-	Concrete	3 years
S3	Crusher Unit	226m (W)		-	-	13 years



S1 – Abandoned hut - 115m (E)



S2 – Motor Room - 109m (E)



S3 – Crusher Unit - 226m (W)

Figure 3.1 Photographs of the structures located within 300 m radius



Figure 3.2 Google Image showing structures located within 300 m radius

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE



Figure 3.3 Environmental Features Within 500m Radius

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE



E1- Odai - Adjacent to Eastern Side (10m Safety Maintained)



E2- Cartrack - Adjacent to N (10m safety provided)



E3 - Tank - 420m (S)

Figure 3.4 Photographs of the Environmental Features Within 500m Radius

3.6 ENVIRONMENTAL SETTINGS OF THE PROJECT

The Environmental settings of the project covering 10km radius of study area is given in Table 3.2. The study area map within 500 m radius is given in Figure- 3.3 & 3.4 and satellite and Topo image showing 10 km radius is given in Figure 3.5 & 3.6.

Table 3.2 Environmental Settings of the Study Area – 10 km radius

S.NO	Particulars	Description
1.	Latitude & Longitude	Latitude: 09°21'12.93"N to 09°21'17.96"N Longitude: 77°36'36.59"E to 77°36'42.09"E.
2.	The altitude of the area	137 m from MSL
3.	Topography	Plain Terrain
4.	Land use of M.L. area	Patta Land

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

5.	Extent of the Lease area	1.90.50 Ha
6.	Nearest Highway	(NH-744) Tenkasi – Tirumangalam Road – 11.7 km (W) (SH-41) Tirunelveli – Rajapalayam Road - 5.4 km (W)
7.	Nearest Railway Station	Cholapuram RS (4.36 km - W)
8.	Nearest airport	Madurai Airport (74.92 km - NE)
9.	Nearest Village	Kuruchiarpatti – 610m (NW)
10.	Nearest Town	Rajapalayam – 12.21 km – NW
11.	Water Bodies	Odai – Adjacent to Eastern Side (10m Safety Maintained), Tank – 420m (S), Solasseri River – 1.3 km (SW), Cholapuram River – 2.1 km (W), Odai – 2.5 km (NE)
12.	Historical Places/Places of Tourist/ Archeological site	NIL within 10 km radius
13.	Environmental sensitive areas, Protected areas as per Wildlife Protection Act, 1972 (Tiger reserve, Elephant reserve, Biospheres, National parks, Wildlife sanctuaries, community reserves and conservation reserves)	Nil within 10 km radius Srivilliputhur Megamalai Tiger Reserve- 17.3km (NW)
14.	Reserved / Protected Forests	Nil within 10 km radius Kothankulam R.F. – 10.2 km (NW)
15.	Defense Installations	NIL within 10 km radius
16.	Seismic Zone	Zone – II (Least Active)
17.	Other Industries in the study area	NIL within 10 km radius
18.	Interstate boundary	NIL

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

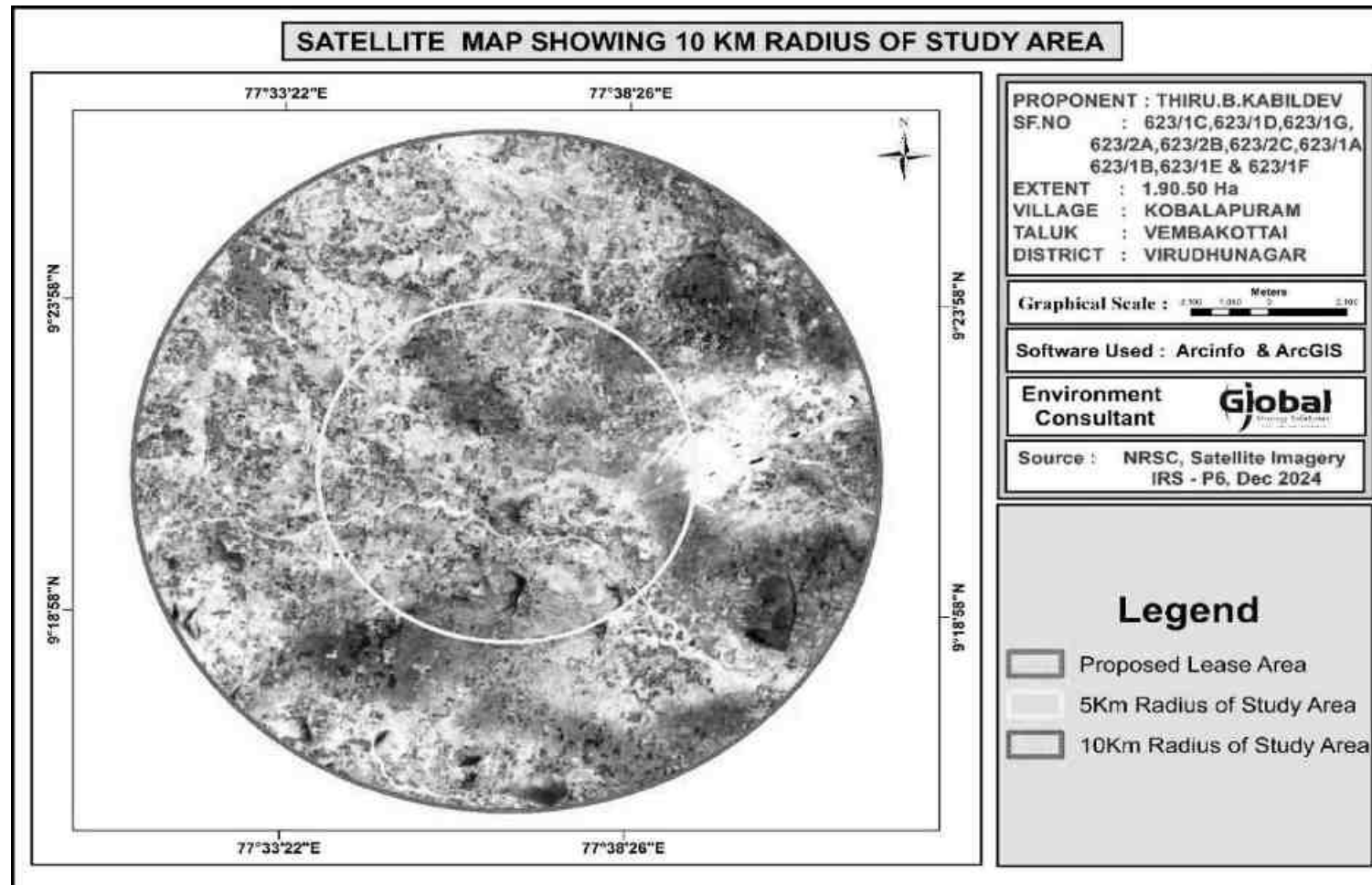


Figure 3.5 Satellite Image of the Study Area

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

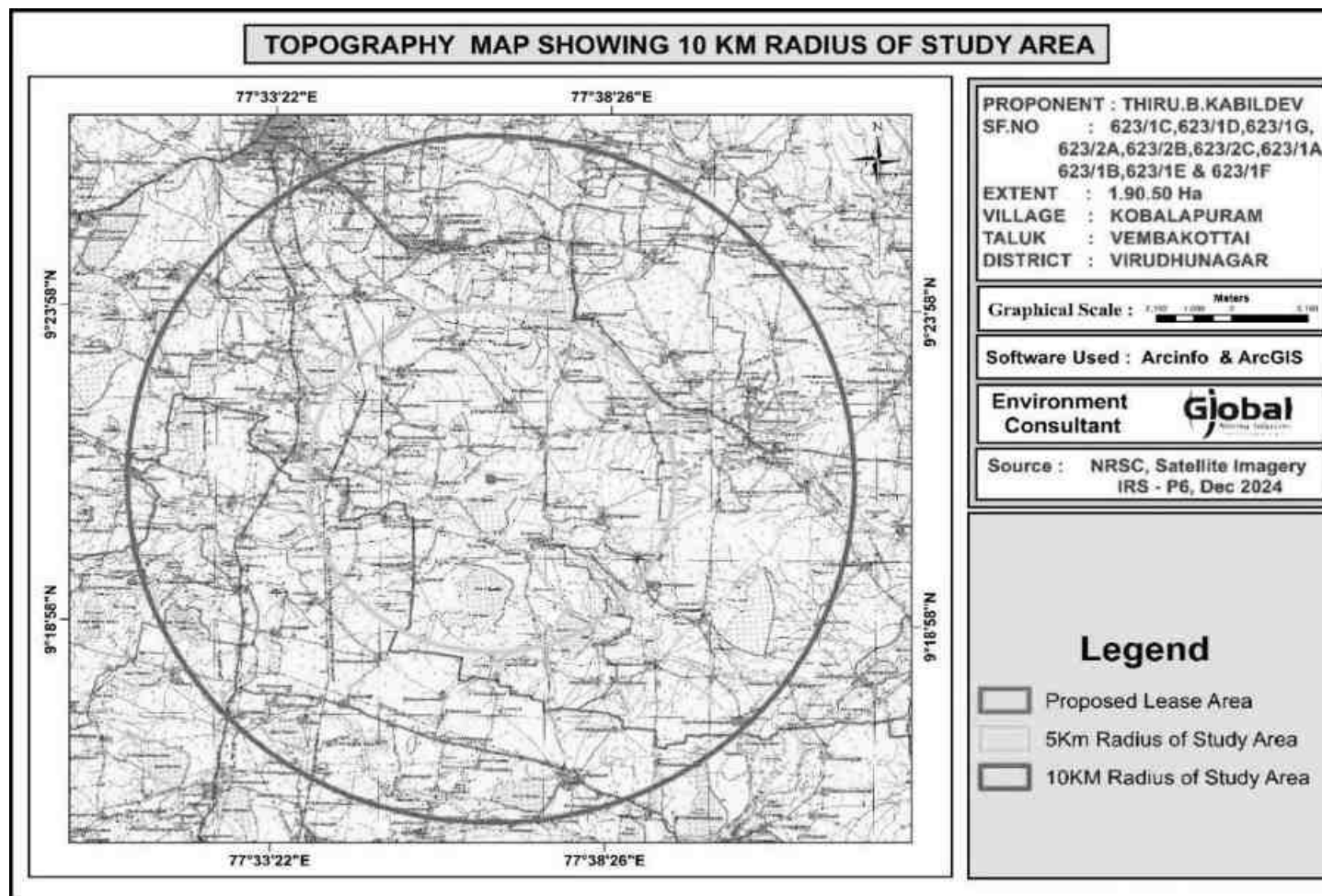


Figure 3.6 Topo map Showing Study Area

3.7 EXISTING ENVIRONMENTAL SCENARIO

3.7.1 MICRO- METEOROLOGY

Meteorology is the key to understand the Air quality. The essential relationship between meteorological condition and atmospheric dispersion involves the wind in the broadest sense. Wind fluctuations over a very wide range of time, accomplish dispersion and strongly influence other processes associated with them.

3.7.1.1 CLIMATE AND RAINFALL DATA

Within the district of Virudhunagar, in the plains, the temperatures range from a minimum of 25.6 °C to a maximum of 39.5 °C. Sub-tropical climate prevails over the study area. The temperature is maximum during March to May. The nearest IMD station is Madurai Airport (45 km in north) and nearest rain gauge station is located at Sattur. The rainfall data details are given in the below Table 3.3. (Source: Revenue Department, Virudhunagar)

Table 3.3 Rainfall Data

Actual Rainfall in mm					Average rainfall for 5 years in mm
2020	2021	2022	2023	2024	
1303.7	968.4	883.1	1166.8	949.1	1054.22

Source: <https://hydro.imd.gov.in>

Seismic Sensitivity

The proposed project site falls in the seismic Zone II, low damage risk zone as per BMTPC, Vulnerability Atlas of Seismic zone of India IS: 1893 – 2002. Meteorological Data Recorded at Site details are given in the Table 3.4.

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

Table 3.4 Meteorological Data Recorded at Site

S.NO	Parameters	March to May 2025
1.	Temperature (0C)	Min 25.6
		Max. 39.5
		Avg 32.6
2.	Relative Humidity (%)	Min 56.0
		Max 67.0
		Avg 61.5
3.	Wind Speed (m/s)	Min 0
		Max 4.6
		Avg 2.3
4.	Predominant Wind Direction	SSE & WSW

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

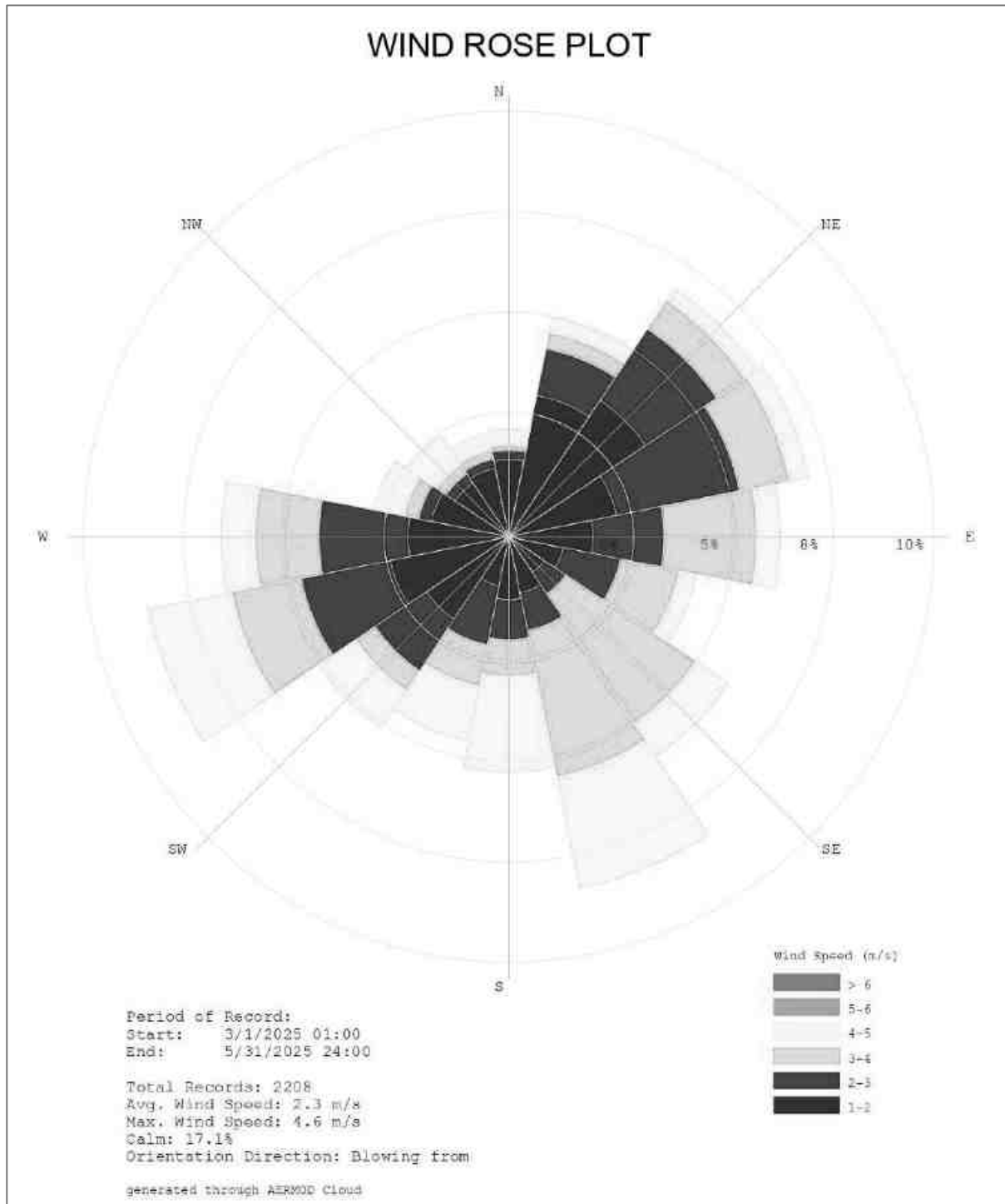


Figure 3.7 Wind Rose Diagram – Blowing From (March to May 2025)

3.7.2 AIR ENVIRONMENT

The prime objective of the ambient air quality study is to assess the existing air quality of study area and its conformity to NAAQS. The observed sources of air pollution in the study area are industrial, traffic and domestic activities. The baseline status of the ambient air quality has been established through a scientifically designed ambient air quality monitoring network considering the followings:

- Meteorological condition on synoptic scale
- Topography of the study area;
- Representatives of regional background air quality for obtaining baseline status;
- Location of residential areas representing different activities;
- Accessibility and power availability; etc.,

3.7.2.1 SAMPLING & ANALYTICAL TECHNIQUES

Table 3.5 Methodology for Air Quality Monitoring

Air Quality Monitoring		
1.	Monitoring Period	Summer (March to May 2025)
2.	Monitoring Location	The monitoring locations for ambient air study is given in Table – 3.6 and Figure 3.8.
Methodology		
3.	A. Sampling	(IS-5182:Part 1:2018)
	B. Analysis	
	Parameters	Protocol
4.	Particulate Matter (PM ₁₀)	Gravimetric (IS 5182: Part 23:2017)
	Particulate Matter(PM _{2.5})	Gravimetric (IS 5182: Part 24:2019)
	Sulphur Dioxide	Colorimetric (West & Gaeke Method) (IS 5182: Part 02: 2017)
	Nitrogen Dioxide	Colorimetric (Modified Jacob & Hocheiser Method) (IS 5182: Part 06:2017)
	Carbon Monoxide	CO Monitor

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

	Monitoring Frequency	2 days in a week, 4 weeks in a month for 3 months in a season.

3.7.2.2 FREQUENCY AND PARAMETERS FOR SAMPLING

Ambient air quality monitoring has been carried out with a frequency of two samples per week at Six (6) locations, adopting a continuous 24 hourly (3 shift of 8-hour) schedule for the period March to May 2025. The baseline data of ambient air has been generated for PM₁₀, PM_{2.5}, Sulphur Dioxide (SO₂), Nitrogen Dioxide (NO₂) and Carbon Monoxide Monitoring has been carried out as per the CPCB, MoEFCC guidelines and notifications.

It was ensured that the equipment was placed preferably at a height of at least 1.8 to 2.2 m above the ground level at each monitoring station, for negating the effects of wind-blown ground dust. The equipment was placed at open space free from trees and vegetation which otherwise act as a sink of pollutants resulting in lower levels in monitoring results. Figure 3.7 shows the Wind Rose Diagram – Blowing From (March to May 2025).

3.7.2.3 AMBIENT AIR QUALITY MONITORING STATIONS

Six (6) monitoring stations were set up in the study area as depicted in Figure 3.8 for assessment of the existing ambient air quality. Details of the sampling locations are as per given below Table 3.6.

Table 3.6 – Ambient Air Quality Monitoring Locations

S. No	Code	Project Location	Latitude	Longitude
1	AQ1	Project Location	9°21'15.95"N	77°36'38.91"E
2	AQ2	Sivalingapuram	9°20'38.06"N	77°38'14.31"E
3	AQ3	Ananthappaickerpatti	9°22'6.57"N	77°38'41.48"E
4	AQ4	Tenkarai	9°18'25.02"N	77°35'0.55"E
5	AQ5	Varagunaramapuram	9°22'25.98"N	77°36'54.72"E
6	AQ6	A. Lakshmipuram	9°21'11.09"N	77°41'20.71"E

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

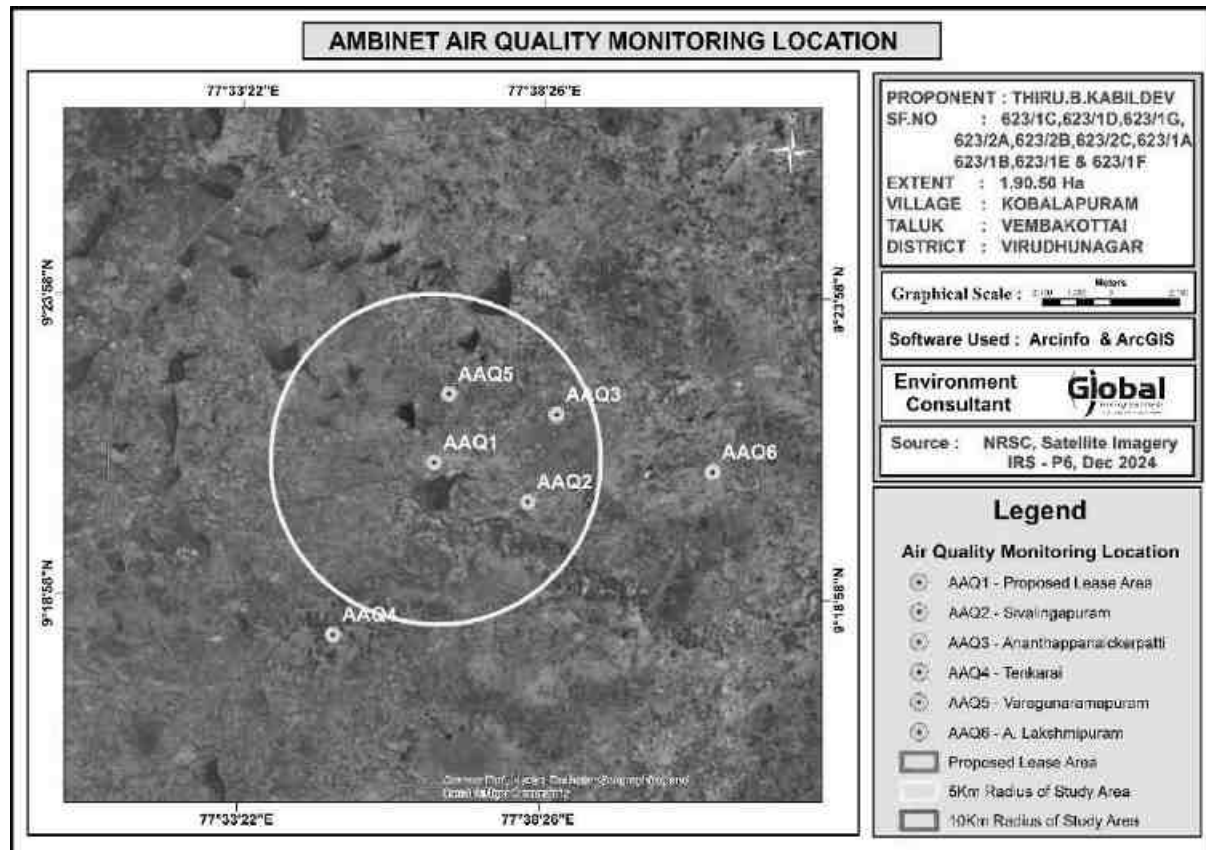


Figure 3.8 Ambient Air Quality Monitoring Locations

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

Table 3.7 Ambient Air Quality Data

Ambient Air Quality											All Value in µg/m3		
S.NO	Parameters	PM10			PM2.5			SO2			NO2		
	Locations	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max
1	A1 - Project Location	53.8	64.7	76.0	26.7	31.5	37.0	5.4	6.5	7.6	8.2	9.3	11.2
2	A2 - Sivalingapuram	46.7	51.8	60.6	22.2	25.2	29.4	4.1	5.3	6.4	7.9	9.1	10.5
3	A3 - Ananthappanaickerpatti	48.7	58.0	67.7	23.1	27.4	31.9	4.7	6.1	8.4	8.5	10.3	12.6
4	A4 - Tenkarai	45.1	53.2	61.9	22.1	26.1	30.2	4.4	5.7	7.1	8.0	9.3	11.1
5	A5 - Varagunaramapuram	40.8	47.5	55.1	20.0	23.2	27.4	4.2	5.5	6.8	7.4	8.7	10.9
6	A6 - A. Lakshmipuram	41.2	46.0	51.6	19.4	21.6	24.3	3.7	5.0	6.5	7.7	8.9	10.2
8	CPCB NAAQS 2009	100			60			80			80		

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

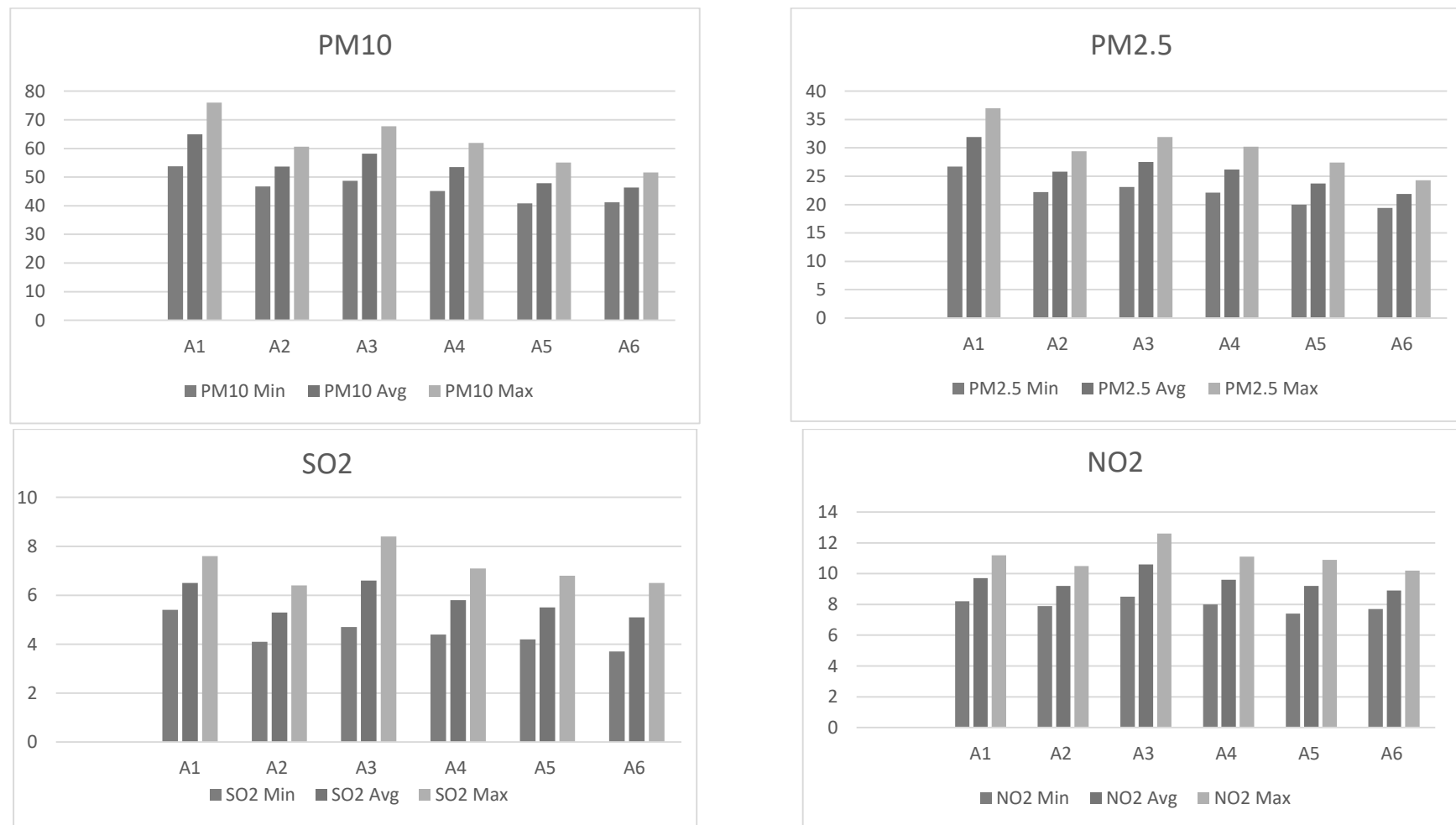


Figure –3.9 - Graphical Representation of Air Quality Data

3.7.2.4 DISCUSSION

From the table it is seen that, in the ambient air, the PM₁₀ values were in the range of 40.8 – 76.0 µg/m³. PM_{2.5} values were in the range of 19.4 – 37.0 µg/m³. SO₂ levels were ranging from 3.7 – 8.4 µg/m³. NO₂ levels were ranging from 7.4 – 12.6 µg/m³. While comparing with the NAAQ Norms laid by MoEFCC, all monitored values of PM₁₀, PM_{2.5}, SO₂, NO₂ & CO were found to be well within the prescribed standards. The CO values in the all locations found to be below detectable limit (DL – 1144 µg/m³). The result of the Ambient Air Quality is given in the Table 3.7.

3.7.3 WATER ENVIRONMENT

The water resources, both surface and groundwater play a significant role in the development of the area. The purpose of this study is to assess the water quality characteristics for critical parameters and evaluate the impacts on agricultural productivity, domestic community usage, recreational resources and aesthetics in the vicinity. The water samples were collected and transported as per the standard guidelines issued by CPCB for analysis.

3.7.3.1 METHODOLOGY

Reconnaissance survey was undertaken and monitoring locations were selected based on:

- Location of the major water bodies
- Location of project site, their water intake and effluent disposal locations
- Likely areas that can represent baseline conditions
- The water samples were collected and were analyzed for physical, chemical, and biological characteristics as per guidelines issued by IS code No.10500/2012.

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

3.7.3.2 SAMPLING LOCATIONS

Six (6) ground water samples were collected from the study area and were analysed for physio-chemical, heavy metals and bacteriological parameters in order to assess the effect of mining and other activities on ground water. The samples were analysed as per the procedures specified by CPCB, IS-10500:2012. The water sampling locations are given in Table 3.8 and shown as Figure 3.10.

Table 3.8 Water Sampling Locations

S. No	Code	Project Location	Latitude	Longitude
Ground Water				
1	GWQ1	Project Location	9°21'15.95"N	77°36'38.91"E
2	GWQ2	Sivalingapuram	9°20'38.06"N	77°38'14.31"E
3	GWQ3	Ananthappaickerpatti	9°22'06.57"N	77°38'41.48"E
4	GWQ4	Tenkarai	9°18'25.02"N	77°35'00.55"E
5	GWQ5	Varagunaramapuram	9°22'25.98"N	77°36'54.72"E
6	GWQ6	A. Lakshmipuram	9°21'11.09"N	77°41'20.71"E

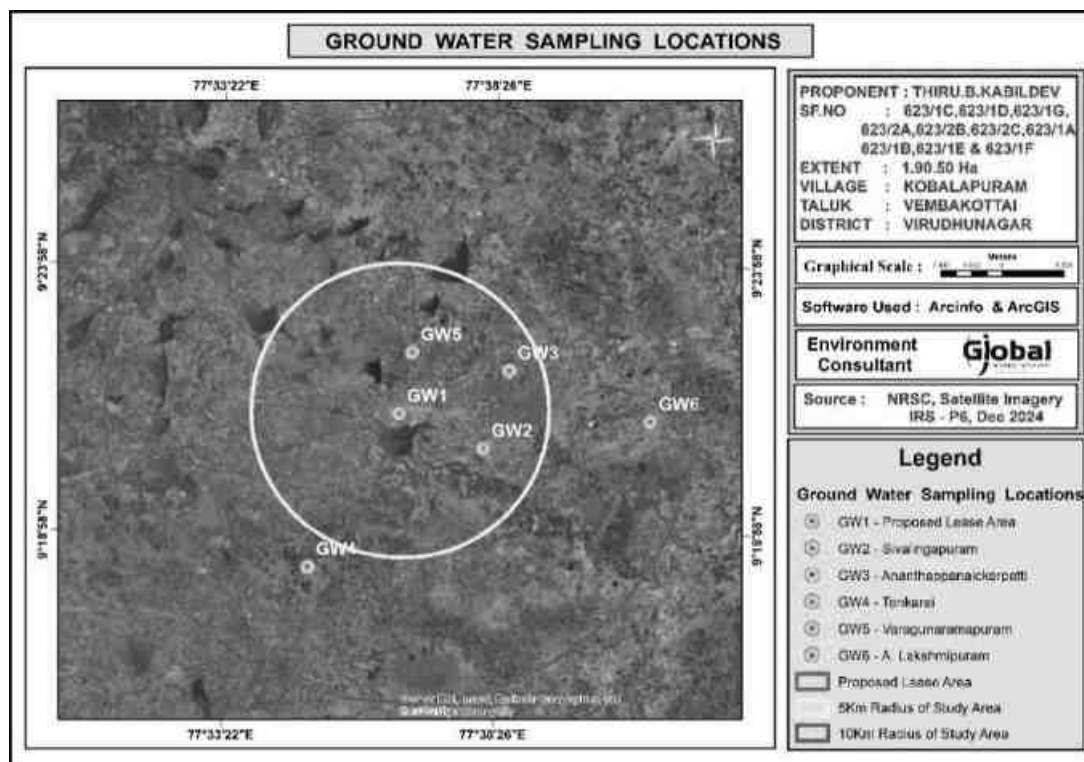


Figure 3.10 Water Monitoring Locations

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

Table 3.9 – Ground Water Analysis Results

Parameter	GW1	GW2	GW3	GW4	GW5	GW6	Permissible Limits
Odour	AGREEABLE	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity	<1	<1	<1	<1	<1	<1	5
pH at 25 °C	7.58	7.36	7.27	7.54	7.69	7.35	6.5- 8.5
Electrical Conductivity	984.5	936.2	564.8	812.2	497.6	920.6	-
Total Dissolved Solids	592	562	340	490	298	552	2000
Total hardness as CaCO ₃	322	396	208	286	194	378	600
Calcium as Ca	71.6	84.8	28.2	67.2	40.8	104	200
Magnesium as Mg	34.3	44.2	33.0	28.3	22.1	28.3	100
Calcium as CaCO ₃	179	212	70.5	168	102	260	-
Magnesium as CaCO ₃	143	184	137.5	118	92	118	-
Total alkalinity as CaCO ₃	286	308	294	304	286	280	600
Chloride as Cl ⁻	79.6	160	91.3	115	40.5	165	1000
Free Residual chlorine as Cl ⁻	BDL (D.L - 0.2)	BDL(D.L-0.2)	BDL(D.L-0.2)	BDL (D.L-0.2)	BDL(D.L-0.2)	BDL(D.L-0.2)	1
Sulphates as SO ₄ ²⁻	192	24.5	20.3	21.5	16.8	36.9	400
Iron as Fe	0.08	0.05	0.04	0.06	BDL(D.L - 0.01)	0.09	0.3
Nitrate as NO ₃	5.32	1.95	1.47	1.65	BDL(D.L – 1.0)	1.44	45
Fluoride as F	0.52	0.48	0.23	0.38	BDL(D.L – 0.1)	0.41	1.5
Manganese as Mn	BDL (D.L - 0.05)	BDL(D.L-0.05)	BDL(D.L-0.05)	BDL(D.L-0.05)	BDL(D.L-0.05)	BDL(D.L-0.05)	0.3

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

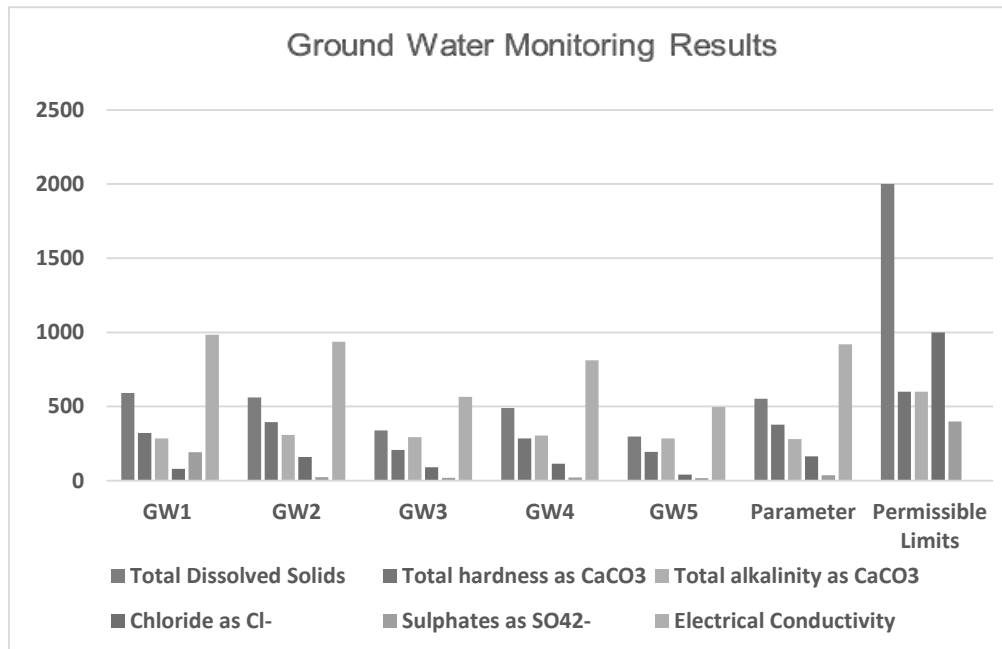


Figure 3. 11 Ground Water - Monitoring Results

3.7.3.3 DISCUSSION

Ground Water

Suitability of ground water for drinking/irrigation/industrial purposes is determined keeping in view the effects of various chemical constituents present in water as required human use, plant use. Though many ions are very essential for the growth of plants and human body but when present in excess, have an adverse effect on health and growth.

As Per the data it has been observed that the pH value varies from 7.27 to 7.69, Chlorides Ranges From 40.5 - 165 mg/l, Sulphates value found to be between 16.8 - 192 mg/l, Fluoride Ranges between 0.23 - 0.52 mg/l, Hardness varies from 194 - 396 mg/l, and Total dissolved solid 298 - 592 mg/l. The ground water has been analyzed as per IS10500: 2012 and found to be suitable for drinking purpose. So the results of chemical and bacteriological analysis of water samples are classified under good class for drinking purpose with respect to total dissolved solids. Total hardness of the samples ranged from soft to moderately hard waters

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

and can be fairly used for drinking. Regular ground water monitoring is suggested as the quality of ground water may fluctuate with groundwater consumption and seasonal variations.

3.7.4 NOISE ENVIRONMENT

The vehicular movement on road and mining activities is the major sources of noise in study area, the environmental assessment of noise from the mining activity and vehicular traffic can be undertaken by taking into consideration various factors like potential damage to hearing, physiological responses, and annoyance and general community responses.

3.7.4.1 SAMPLING LOCATIONS

In order to assess the ambient noise levels within the study area, noise monitoring was carried out at Six (06) locations. The noise level of monitoring locations was carried out by covering 10 km radius of the project area. A noise monitoring methodology was chosen such that it best suited the purpose and objectives of the study. The noise monitoring locations are given in Figure 3.13 and in below Table 3.10.

Table 3.10 Noise Monitoring Locations

S. No	Code	Project Location	Latitude	Longitude
1	NQ1	Project Location	9°21'15.95"N	77°36'38.91"E
2	NQ2	Sivalingapuram	9°20'38.06"N	77°38'14.31"E
3	NQ3	Ananthappanaickerpatti	9°22'6.57"N	77°38'41.48"E
4	NQ4	Tenkarai	9°18'25.02"N	77°35'0.55"E
5	NQ5	Varagunaramapuram	9°22'25.98"N	77°36'54.72"E
6	NQ6	A. Lakshmipuram	9°21'11.09"N	77°41'20.71"E

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

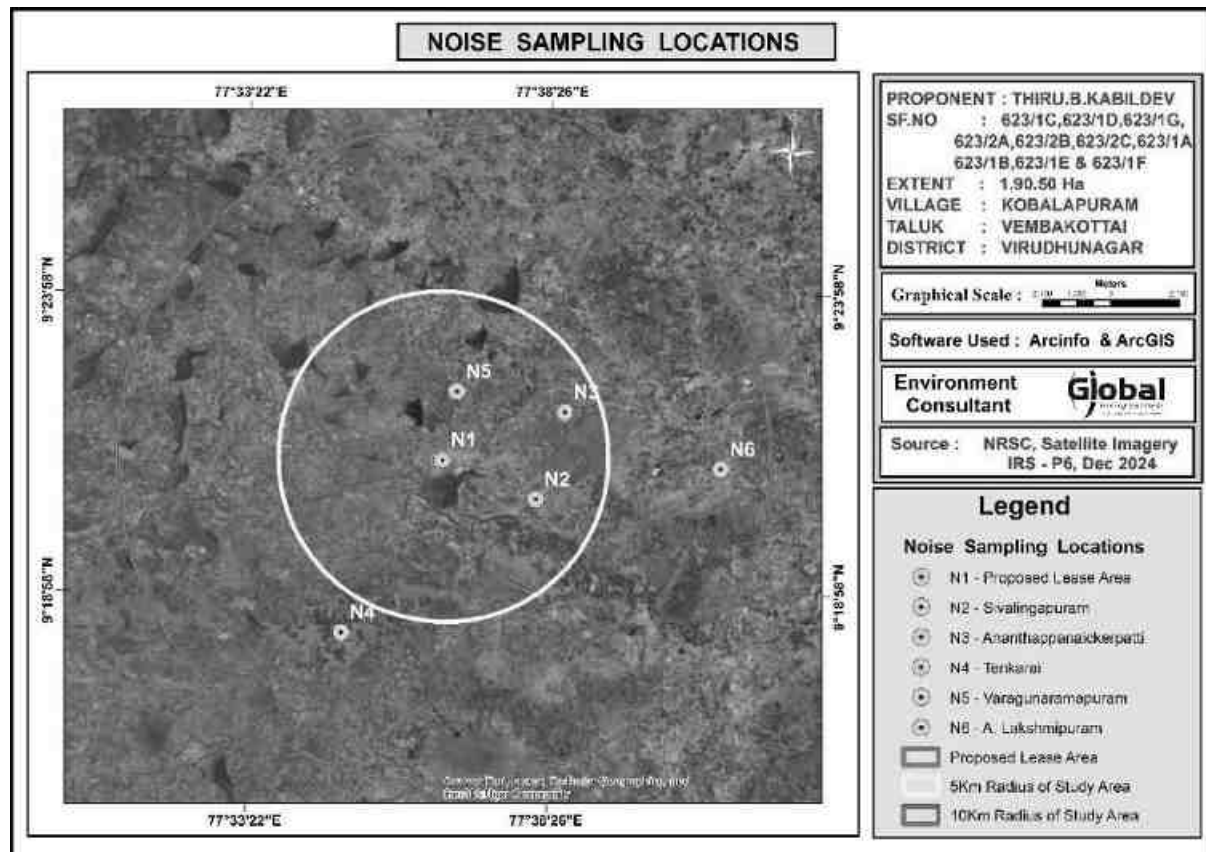


Figure 3.12 Noise Monitoring Location

3.7.4.2 METHOD OF MONITORING

Noise levels were measured using sound level meter manufactured by (Model No - SL4001, Make - Lutron). Sound Pressure Level (SPL) measurements were measured at all locations where ambient air quality monitored; one reading for every hour was taken for 24 hours.

3.7.4.3 NOISE MONITORING RESULT

An analysis of the different Leq data obtained during the study period has been made. Variation was noted during the day-time as well as night-time. The results are presented in below Table 3.11.

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

Table 3.11 Noise Monitoring Result

Monitoring Location	N1	N2	N3	N4	N5	N6
DAY EQUIVALENT	49.7	44.8	48.2	45.4	49.4	47.6
NIGHT EQUIVALENT	38.8	38.6	42.9	39.7	37.9	41.4
DAY & NIGHT EQUIVALENT	48.1	43.5	47.1	44.2	47.7	46.3
Limits as per MoEFCC						
Day equivalent - 55 dB (A); Night equivalent - 45 dB (A); Work zone Exposure in 8 hr - 90 dB (A)						

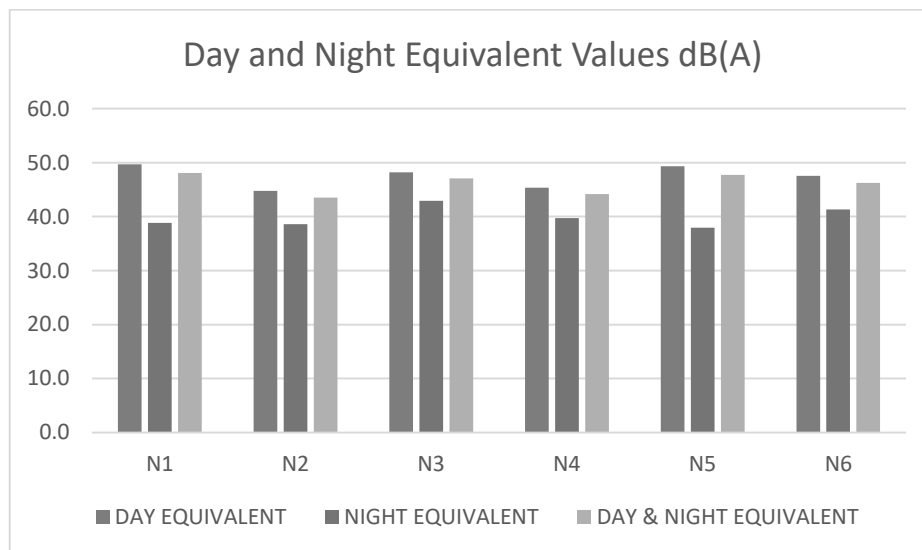


Figure 3.13 Noise Monitoring Results

3.7.4.4 DISCUSSION

From the table it is observed that the day Equivalent Noise (Leq-d) level were ranging from 44.8 to 49.7 dB(A) and Night Equivalent Noise (Leq-n) level were ranging from 37.9 to 42.9 dB(A). Day and Night Equivalent Noise (Leq-n) level were ranging from 43.5 to 48.1 dB(A). While comparing with the MoEFCC Norm of 55 dB(A) for day time and 45 dB(A) for night time in Residential areas, the monitored ambient noise levels are within the limit values.

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

After commencement of mine operation the anticipated noise level will be 38.8 dB – 49.7 dB in the N1 location. (Project Site). It is very negligible and within the prescribed standards of MoEFCC and DGMS.

3.7.5 SOIL ENVIRONMENT

Soil quality of the study area is one of the important components of the land environment. The composite soil samples were collected from the study area and analyzed for different parameters. The locations of the monitoring sites are detailed in Table 3.12 and Figure 3.16.

3.7.5.1 MONITORING LOCATIONS

Soil samples were collected from 6 locations to assess the soil quality in and around the mines. Soil samples collected using sampling augers and field capacity apparatus.

Table 3.12 – Soil Sampling Locations

S. No	Code	Project Location	Latitude	Longitude
1	SQ1	Project Location	9°21'15.95"N	77°36'38.91"E
2	SQ2	Sivalingapuram	9°20'38.06"N	77°38'14.31"E
3	SQ3	Ananthappanaickerpatti	9°22'6.57"N	77°38'41.48"E
4	SQ4	Tenkarai	9°18'25.02"N	77°35'0.55"E
5	SQ5	Varagunaramapuram	9°22'25.98"N	77°36'54.72"E
6	SQ6	A. Lakshmipuram	9°21'11.09"N	77°41'20.71"E

3.7.5.2 METHODOLOGY

For studying soil quality, sampling locations were selected to assess the existing soil conditions in and around the project site representing various land use conditions. The samples were collected by auger boring into the soil up to 90-cm depth. Three locations were selected for soil sampling on the basis of soil types, vegetative cover, industrial & residential activities including infrastructure facilities, which would accord an overall idea of the soil characteristics.

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

Composite grab samples of the topsoil were collected by specified depth, and mixed to provide a representative sample for analysis. They were stored in airtight Polythene bags and analyzed at the laboratory.

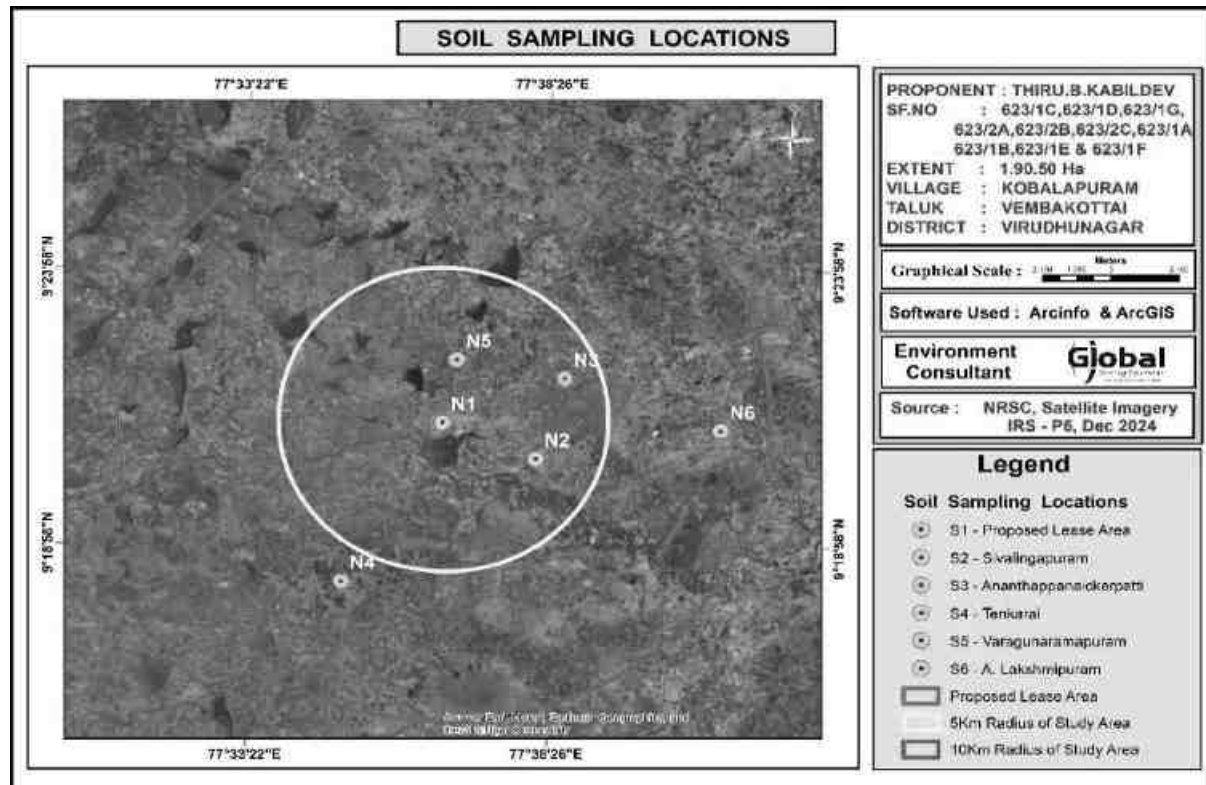


Figure 3.14 - Soil Sampling Stations

3.7.5.3 SOIL TESTING RESULT

Results of the soil samples show that the pH values were found to be 6.89 to 7.73 and Electrical Conductivity values were ranging between 23.71 – 181.6 $\mu\text{mhos/cm}$. Soils are generally Silt Loam. Organic matter values were ranging between 0.62 – 2.55 %. Total Nitrogen values were ranging between 98.8 – 751 mg/kg. Phosphorus values were ranging between 1.34 – 2.28 $\mu\text{g/g}$. Potassium values were ranging between 592 – 820 mg/kg. Sodium values were ranging between 199 – 479 mg/kg. Total Sulphate values were observed to be BDL. The soil quality data for the 6 samples collected and analyzed are provided in Table no – 3.14.

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

Table 3.13 Soil Testing Result

PARAMETER	S1	S2	S3	S4	S5	S6
pH at 25 °C	7.31	7.57	7.73	7.35	7.15	6.89
Electrical Conductivity	33.96	23.71	77.35	181.6	154.8	98.47
Dry Matter content	97.57	97.86	93.85	90.2	95.8	96.54
Water Content	2.43	2.14	6.15	9.8	4.2	3.46
Organic Matter	0.62	1.21	0.81	2.55	2.14	1.56
Soil texture	Clay loam	Clay loam	Silt loam	SILT LOAM	SILT LOAM	SILT LOAM
Grain Size Distribution i. Sand	29.87	31.42	21.56	39.45	35.97	36.58
i. Silt	34.38	39.86	52.64	55.31	54.11	52.47
ii. Clay	35.75	28.72	25.8	5.24	9.92	10.95
Phosphorous as P	1.83	2.28	1.59	1.34	1.59	1.34
Sodium as Na	456	479	342	199	218	235
Potassium as K	782	820	656	766	655	592
Total Nitrogen	100	157	98.8	751	590	636
Total Sulphur	BDL(D.L.0.02)	BDL(D.L.0.02)	BDL(D.L.0.02)	BDL(D.L.0.02)	BDL(D.L.0.02)	BDL(D.L.0.02)
Water Holding Capacity	38	36	40	42	39	40
Porosity	18.6	19.2	18.5	18.4	19.2	17.6

3.7.6 LAND ENVIRONMENT

The main objective of this section is to provide a baseline status of the study area covering 10km radius around the project periphery; so that temporal changes due to the mining activities on the surroundings can be assessed in future.

3.7.6.1 LAND USE PATTERN OF THE PROJECT AREA

The present and the post mining land use pattern is shown below.

Table 3.14 Land use pattern of the project site

Sl. No	Land Use	Present Area (Ha)	Area in use during the quarrying period (Ha)
1.	Quarrying Pit	Nil	1.46.00
2.	Infrastructure	Nil	0.01.00
3.	Roads	Nil	0.01.00
4.	Green Belt	Nil	0.42.50
5.	Unutilized	1.90.50	Nil
Total		1.90.50	1.90.50

At the end of life of mine, the excavated mine pit / void of 1.46.00 Ha. will act as artificial reservoir for collecting rain water and helps to meet out the demand or crises during drought season.

After mine closure the greenbelt (0.42.50 Ha.) will be developed along the safety barrier and top benches and 0.02 ha are approach road and Infrastructure.

3.7.6.2 LAND USE PATTERN OF THE STUDY AREA

A visual interpretation technique has been adopted for land use classification based on the keys suggested in the Chapter – V of the guidelines issued by NNRMS Bangalore & Level III classification with 1:50,000 scale for the preparation of land use mapping. Land use pattern of the area was studied through LISS III imagery of Bhuvan (ISRO). The 10 km radius map of study area was taken for analysis of Land use cover. The land use map of the study area is given in Figure 3.16.

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

Table 3.15 Land use pattern of the Study area of 10 km radius

Sl.No.	LAND USE / LAND COVER	Area in Sq.Km	Area in %
1	Built-up land	14.13	4.42
2	Crop land	156.29	48.89
3	Fallow land	20.04	6.26
4	Land with scrub	53.44	16.71
5	Land without scrub	36.74	11.49
6	Existing Quarry	3.72	1.16
7	Plantations	8.35	2.61
8	Water bodies	26.94	8.46
	Total Area	319.65	100.0

Source: Survey of India Toposheet and Landsat Satellite Imagery

From above table it is inferred that the majority of the land in the study area is Crop Land (48.89 %) followed by Land with scrub (16.71 %).

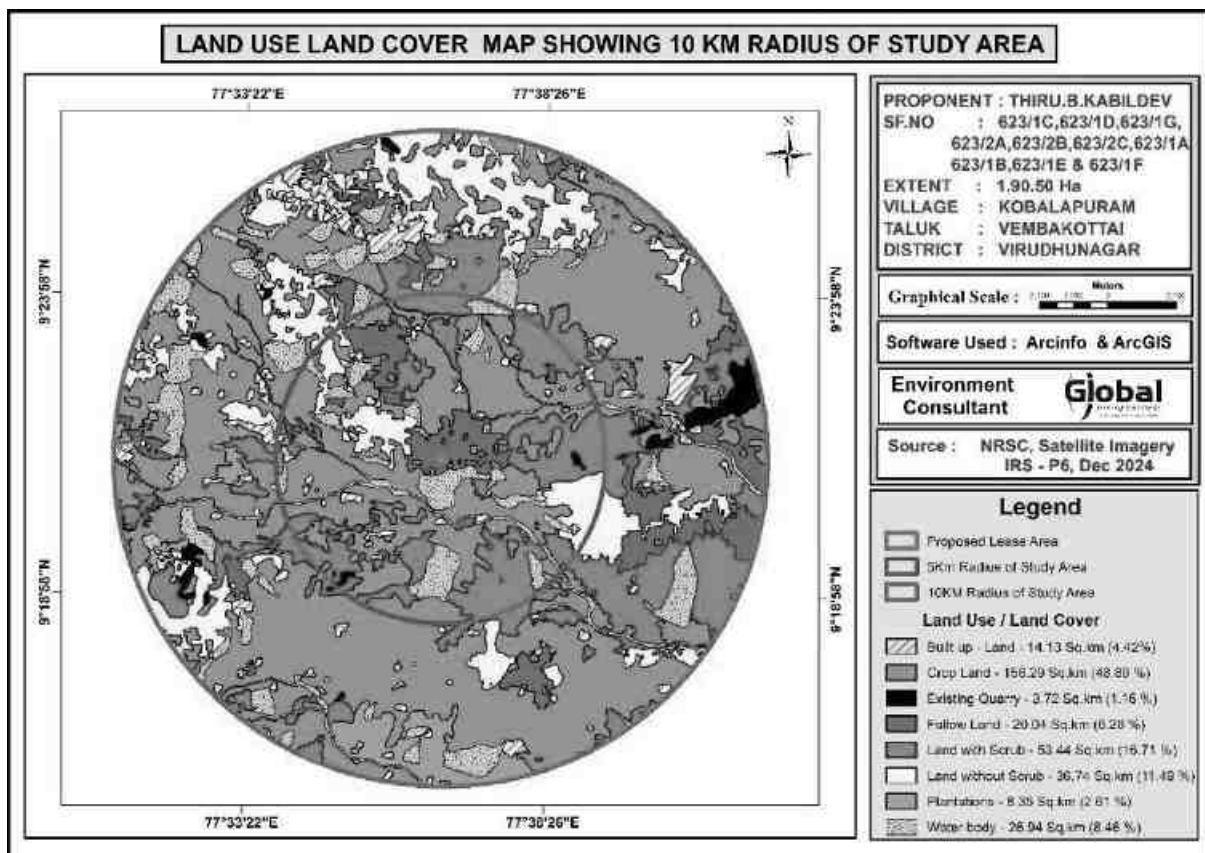


Figure 3.15 Land use map of the study area

3.7.7 BIOLOGICAL ENVIRONMENT

Study of the biological environment of any area comprises of well-planned ecological survey for the floristic and faunal composition of the areas through various scientifically planned techniques. Accordingly, the ecological survey for the proposed Rough stone & Gravel Quarry area including core and buffer zone were carried out to identify various species occurring in the area.

3.7.7.1 FLORA

An ecological survey of the study area was conducted with reference to listing of species and assessment of the existing baseline ecological (Terrestrial and Aquatic Ecosystems) conditions. The objective of the survey is as follows:

- Generate existing data from field observations of various terrestrial floristic occurrences.
- Collect secondary data from Government records as well as through discussion with Forest officials, knowledgeable public etc.,
- Compare the data with authentic past records to identify changes, if any.
- Identify the impact of project operations on the biological aspects.

To accomplish the above objectives, a general ecological survey covering an area of 10 km radius was conducted. The locations were identified for phyto-sociological aspects to assess the current status.

3.7.7.2 FLORISTIC COMPOSITION IN CORE ZONE

The lease area is a Non- Forest, Private Land with Scrub and Thorny Bushes. In the core zone, there are no trees.

3.7.7.3 FLORISTIC SCENARIO IN BUFFER ZONE AREA

The present report gives the review of published secondary data and the results of field sampling conducted during March to May 2025 and there are no forest

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

blocks in study area. The detailed ecological assessment of the study area has been carried out and are presented in below Table.

Table 3.16 List of Flora

S.NO	Scientific Name	Family Name	Local Name
GRASS			
1	<i>Arundo donax</i>	Poaceae	Common needle, grass
2	<i>Dendrocalamus strictus</i>	Poaceae	Kalamungil
3	<i>Heteropogon contortus</i>	Poaceae	Oosipullu
TREES			
1	<i>Terminalia Bellirica</i>	Combretaceae	Thaan-Dri Kaai
2	<i>Schefflera Stellata</i>	Peymiratti	Araliaceae
3	<i>Citrus Limon</i>	Rutaceae	Lemon
4	<i>Ficus Benghalensis</i>	Moraceae	Krishna Fig, Krishna's
5	<i>Musa Paradisiaca</i>	Musaceae	Plantain, Vazhai
6	<i>Azadirachta Indica</i>	Meliaceae	Veppai,
7	<i>Syzygium Cumini</i>	Myrtaceae	Nagai
8	<i>Thespesia Lampas</i>	Malvaceae	Common Mallow, Kattupparuthi
9	<i>Psidium Gujava</i>	Myrtaceae	Guava
10	<i>Erythrina Indica</i>	Fabaceae	Mullu Murungai
11	<i>Adina Cordifolia</i>	Rubiaceae	Manjakadambu
12	<i>Acacia Nilotica</i>	Fabaceae	Karuvelam
13	<i>Musa Paradisiaca</i>	Musaceae	Plantain, Vazhai
14	<i>Delonix Regia</i>	Caesalpiniaceae	Flame Tree, Royal Poinciana
15	<i>Tamarindus Indica</i>	Caesalpiniaceae	Puli
16	<i>Cocus Nucifera</i>	Arecaceae	Coconut, Thennai
17	<i>Ailanthus Excelsa</i>	Simaroubaceae	Perumaram
18	<i>Pongamia Pinnata</i>	Fabaceae	Indian Beech, Pungam
19	<i>Acacia Leucophloea</i>	Mimosaceae	Velvelam
20	<i>Morinda Tinctorial</i>	Rubiaceae	Nuna
21	<i>Dalbergia Sissoo</i>	Fabaceae	Nukkam Totakatti
22	<i>Erythrina Variegata</i>	Fabaceae	Kalyana Murungai
23	<i>Borassus Flabellifer</i>	Arecaceae	Palmyra Palm

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

24	<i>Thespesia Lampas</i>	Malvaceae	Common Mallow, Kattupparuthi
25	<i>Lannea Coromandelica</i>	Anacardiaceae	Indian Ash Tree, Moya, Wodier
26	<i>Samanea Saman</i>	Mimosodeae	Thoongumoonjj Maram
27	<i>Prosopis Juliflora</i>	Fabaceae	Algaroba, Mesquite
28	<i>Eucalyptus Globulus</i>	Mytaceae	Blue Gum
HERBS			
1	Aloe Vera	Agavaceae	Katthaalai
2	<i>Acalypha Indica</i>	Euphorbiaceae	Koli-P-Puntu, Kuppai-Meni
3	<i>Partheniumhysterophorus</i>	Asteraceae	Congress Grass
4	<i>Chloris Dolichostachya</i>	Poaceae	Finger Grass, Kuruthupillu
5	Aerva Persica	Amaranthaceae	Perumpeelai
6	<i>Zea Mays</i>	Poaceae	Maize, Corn
7	<i>Thespesia Populnea</i>	Malvaceae	Indian Tulip Tree Poovarasu
8	<i>Vernonia Cinereal</i>	Asteraceae	Purplefleabane, Mookuthipoondur
9	<i>Ocimum Americanum</i>	Lamiaceae	Hoary Basil, Nai Thulasi
10	<i>Tribulus Terrestris</i>	Zygophyllaceae	Puncture Vine, Nerunji
11	<i>Cynodon Dactylon</i>	Poaceae	Bermuda, Grass, Arugampul
12	<i>Ocimum Sanctum</i>	Lamiaceae	Holy Basil, Thulasi
13	<i>Amaranthus Viridis</i>	Amaranthaceae	Kuppai-K-Kirai
SHRUBS			
1	<i>Anisomeles Malabarica</i>	Lamiaceae	Peyimarutti
2	<i>Vitex Negundo.</i>	Verbenaceae	Nocchi
3	<i>Carissa Spinorum</i>	Apocynaceae	Sirukilaa
4	<i>Cassia Auriculate</i>	Fabaceae	Aavarampoo
5	<i>Indigofera Longiracemosa</i>	Fabaceae	Karuppu Avuri
6	<i>Lantana Camara</i>	Verbenaceae	Unnichi
7	<i>Triumfetta Pentandra</i>	Tiliaceae	Ottu Pullu

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

8	<i>Carica Papaya</i>	Caricaceae	Pappali
9	<i>Cassia Auriculate</i>	Fabaceae	Aavarampoo
10	<i>Calotropis Gigantea R.Br.</i>	Fabaceae	Tuvarai
11	<i>Lawsonia Inermis</i>	Lythraceae	Henna, Maruthondri
CLIMBERS			
1	<i>Cucurbita Pepo</i>	Cucurbitaceae	Parangi
2	<i>Cissus Quadrangularis</i>	Vitaceae	Perandai
3	<i>Pergularia Daemia</i>	Asclepiadaceae	Uttamani
4	<i>Cardiospermum Halicacabum</i>	Sapin	Mudakathan
5	<i>Cayratia Trifoliata</i>	Vitaceae	Kattuppirantai
6	<i>Coccinia Indica</i>	Cucurbitaceae	Kovai
7	<i>Ipomoea Pescarpae</i>	Convolvulaceae	Adambu
8	<i>Diplocyclos Palmatus</i>	Cucurbitaceae	Iviralkovai

3.7.7.4 LIST OF FAUNA

The list of fauna within the study area is given in Table No – 3.18.

Table 3.17 List of Fauna

S.No	Common name	Scientific name	Family	IUCN / WPA schedule
MAMMALS				
1	Indian Palm squirrel	Funambulus palmarum	Squirrel	IV
2	Hare	Lepus nigricollis	Leporids	IV
3	House rat	Rattus rattus	Murids	IV
4	Mannuli paambu	Eryx johani	Boidae	-
5	Indian Grey Mongoose	Herpestes edwardsii	Mongoose	IV
6	Field mouse	Rattus norvegicus	Murids	IV
7	Rusty spotted Cat	Felis rubiginosa	Felidae	IV
REPTILES				
1	Common Garden lizard	Calotes versicolor	Agamid lizards	IV

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

2	Rough tailed Sand boa	Gongylophis conicus	Boidae	IV
3	Indian Cobra	Naja naja	elapid snakes	II
4	Indian mud turtle	Lissemys punctate	Softshell turtles	IV
5	Common Green Snake	Passerita mycterizaris	Colubrid Snakes	IV
6	Common rat snake	Ptyas mucosus	Colubrid Snakes	II
BIRDS				
1	Grey Partridge	Francolinus pondicerianus	Phasianidae	IV
2	Indian Ring Dove	Streptopelia decaocto	Pigeons and doves	IV
3	Red collared dove	Streptopelia tranquebarica	Pigeons and doves	IV
4	Astur badius	Shikra	Accipitridae	IV
5	Black Drongo	Dicrurus macrocerus	Drongos	IV
6	House Sparrow	Passer domesticus	Sparrow	IV
7	Weaver bird	Ploceus Philippines	Ploceidae	IV
8	Rose Ringed Parakeet	Psittacula krameria	Parrots	IV
9	Little egret	Egretta garzetta	Heron	IV
10	Redvented BulBul	Pycnonotus cafer	Bulbul	IV
FISH				
1	Common carp	Cyprinus earpio	Minnows and Carps	IV
2	Tilapia	Oreochromis mossambicus	Cichlid	IV
3	Carplet	Amblypharyngodon Sp	Cyprinidae	IV
4	Trout	Chela sp	-	IV
5	Punctatus	Ophiocephalus	Snakehead	IV

The core zone of the area is Patta land, no forest land is involved in the project area. The proposed quarry area is covered by thorny bushes. There is no Wild Life

Sanctuary or National Park within the study area of 10km. There is no schedule I species of animals observed within study area as per Wildlife Protection Act 1972 as well as no species is in vulnerable, endangered or threatened category as per IUCN. There is no endangered red list species found in the study area. Hence this small mining operation over short period of time will not have any significant impact on the surrounding flora and fauna.

3.7.8 TOPOGRAPHY

The area applied for quarry lease is exhibits almost plain topography covered by Gravel formation. The massive Gneissic Rock formation is noticed below 5 m (Avg) Gravel formation and sloping towards Southeastern side of the area, the altitude of the area is above 137 m (maximum) from MSL. No major river is found nearby the lease applied area. Water table is found at a depth of 68 m in summer and 57m in rainy seasons. Temperature of the area is reported to be 180C to a maximum of 42⁰C during summer. Rainfall of this area is about 990 mm to 1030 mm during the both NE & SW monsoons.

3.7.9 DRAINAGE PATTERN OF THE AREA

The ground water table is reported as 68 m below ground level. In the proposed mining plan only 45m (below ground level) depth has been envisaged as workable depth for safe & economic quarrying for the entire lease period. Hence the quarrying operation may not affect the ground water. Drainage map of the study area is shown in then Figure 3.18.

The ground water may not rise immediately in this type of mining. However, the rain water percolation and collection of water from the seepage shall be less than 300 lpm and it shall be pumped about periodically by a stand by diesel powered Centrifugal pump motivated with 7.5 HP Motor. The quality of water is potable and it is not contaminated with any hazardous things. Hence, water stored in the quarry pit will be pumped into the adjacent agricultural fields. Further the water stored in the old pit will also be used for plantation purposes.

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

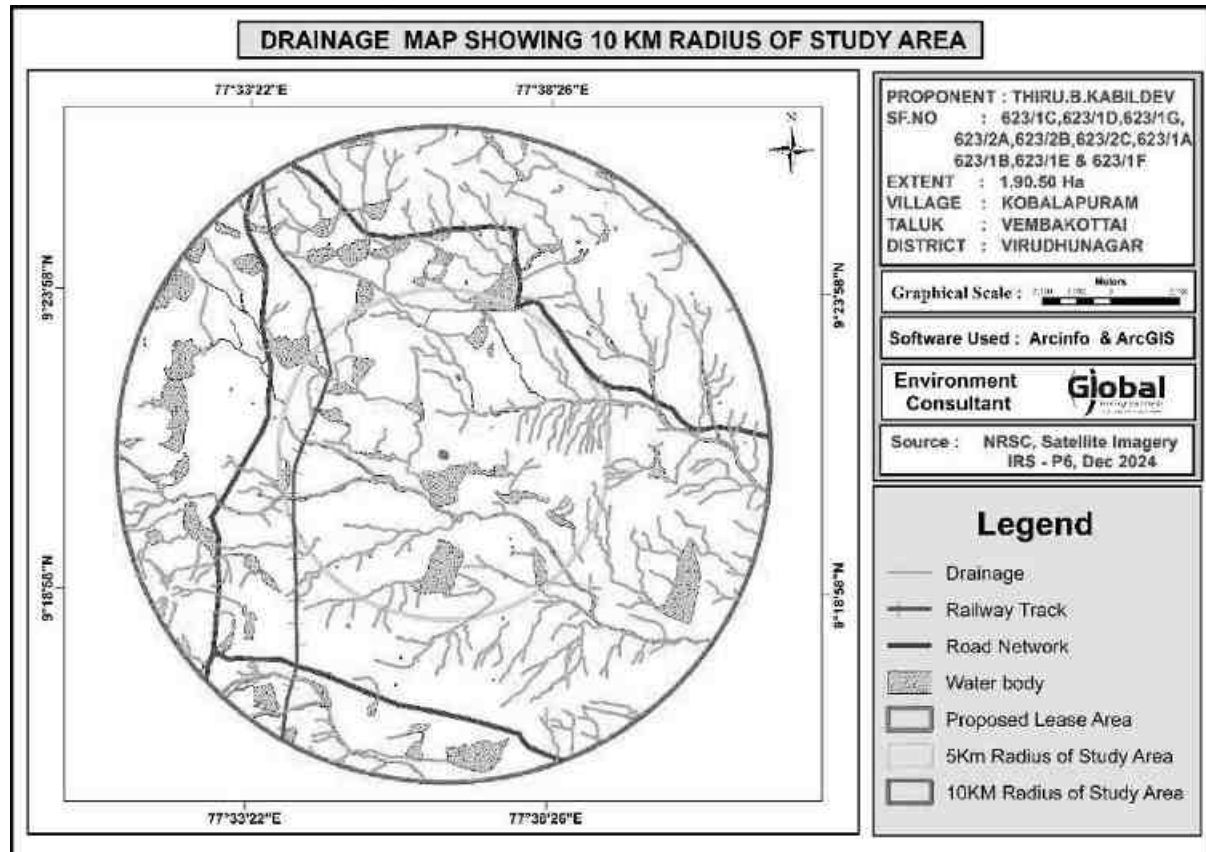


Figure 3.16 Drainage map of the study area

3.7.10 GEOMORPHOLOGY

Predominantly the buffer zone is dominated by Shallow & Moderately Buried Pediplan, and the lease area falls under pediment – Inselberg Complex. Geomorphology of the study area is detailed below. The geomorphology of the study area is given in Figure 3.20.

Sl.No	GEOMORPHOLOGY	Area in Sq.Km	Area in Percentage
1	Moderately Weathered Buried Pediplan	85.21	26.75
2	Pediment – Inselberg Complex	10.75	3.37
3	Residual Hill	0.87	0.27
4	Shallow Weathered Buried Pediplan	221.27	69.46
5	Structural Hills	0.48	0.15
	Total Area	318.12	100.00

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

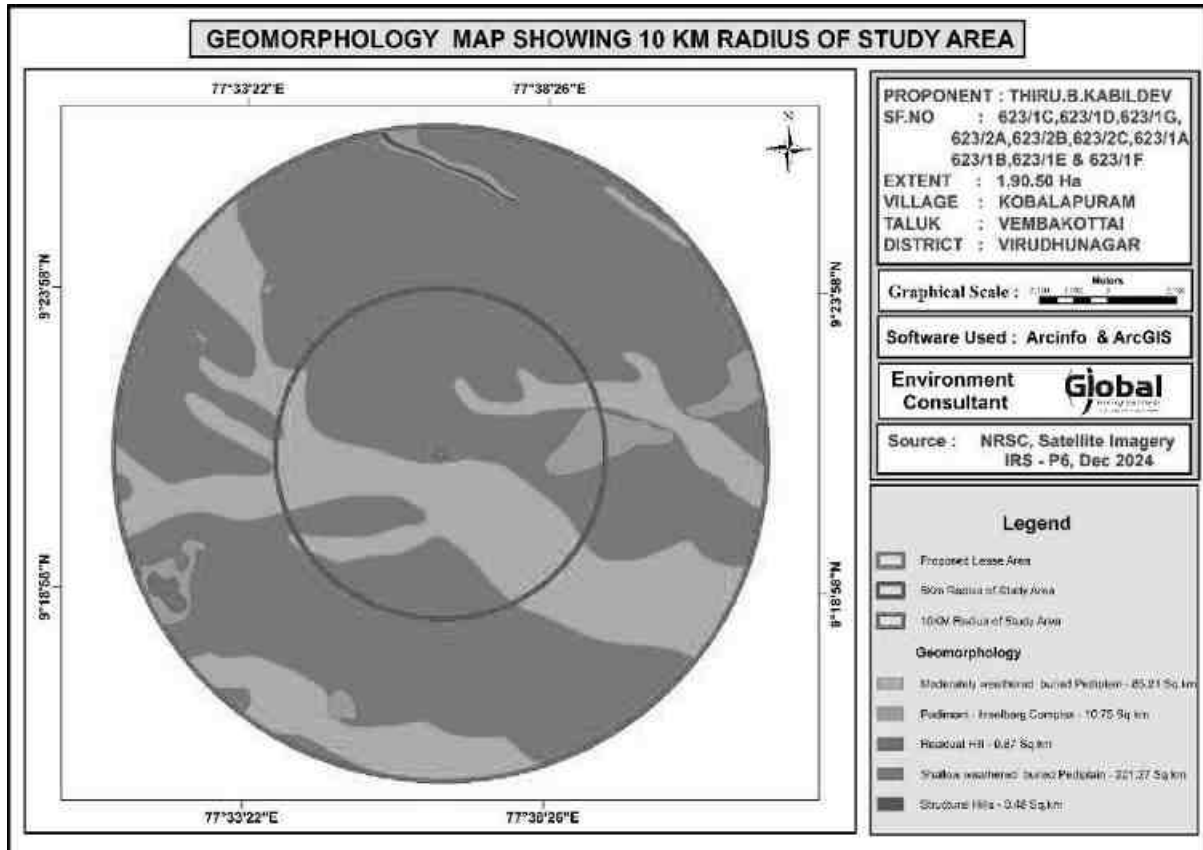


Figure 3.17 Geomorphology map of the study area

3.7.11 GEOLOGY

The regional geology of the study area is shown below in Figure 3.19. The type of rock formation in the core and buffer zone is composed of Charnockite & Hornblende Biotite Gnesis. The geology of the study area is detailed below.

Sl.No.	GEOLOGY	Area in Sq.Km	Area in Percentage
1	Charnockite	30.75	9.62
2	Hornblende Biotite Gnesis	288.9	90.38
	Total Area	319.15	100.00

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

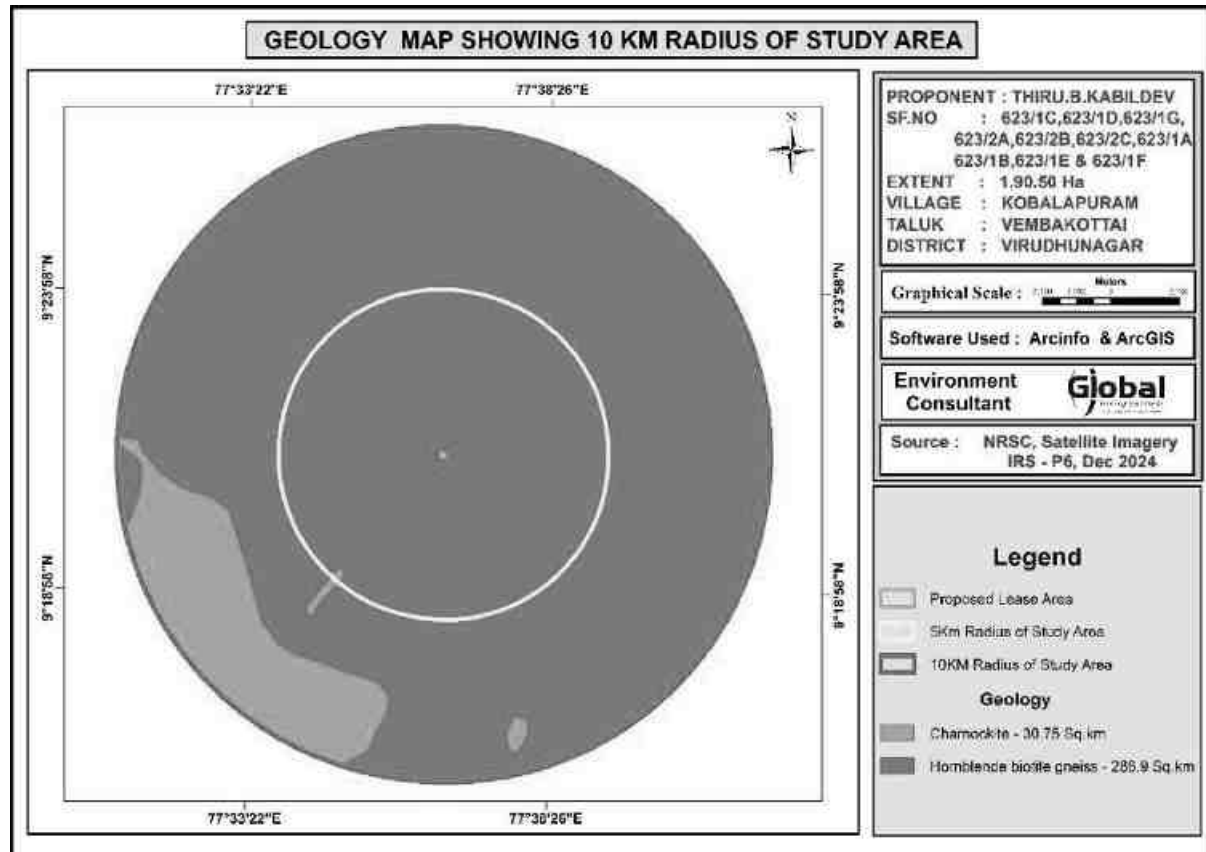


Figure 3.18 Geology map of the study area

3.7.12 SOCIO-ECONOMIC ENVIRONMENT

Socio-economic study is an essential part of environmental study. It includes demographic structure of the area, provision of basic amenities viz., housing, education, health and medical services, occupation, water supply, sanitation, communication, transportation, prevailing diseases pattern as well as feature like temples, historical monuments etc., at the baseline level. This will help in visualizing and predicting the possible impact depending upon the nature and magnitude of the project.

It is expected that the Socio-Economic Status of the area will substantially improve because of this proposed project. As the proposed project will provide direct and indirect employment and improve the infrastructural facilities in that area and, thus, improve their standard of living.

3.7.12.1 OBJECTIVES OF THE STUDY

The objectives of the socio-economic study are as follows:

- To study the socio-economic status of the people living in the study area of the proposed mining project
- To assess the impact of the project on Quality of life of the people in the study area
- To recommend Community Development measures needs to be taken up in the study Area.

3.7.12.2 SCOPE OF WORK

- To study the Socio-economic Environment of the area from the secondary sources;
- Data Collection & Analysis
- Prediction of project impact
- Mitigation Measures

SUMMARY OF VILLAGES IN BUFFER ZONE

Village/ Town Name	Radius	Taluk Name	District Name
Gopalapuram	0-5 Km	Theni and Andipatti	Virudhunagar
Melsendattiyapuram			
Kilavikulam			
Solapuram			
Nallamanayakkanpatti			
Nattampatti			
Sivalingapuram			
Kil Rajakularaman	5-10 Km	Theni and Andipatti	
Tombakulam			
Reddiypatti			

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

Sattirappatti			
Ramalingapuram			
Solapuram			
Terku Cholanpuram			
Perumalpatti			
Shanmugasundrapuram			
Alangulam			
Lakshmipuram			
Valaiyapatti			
Melanmarainadu			
Appaiyanayakkanpatti			
Kalingappatti			
Paruvakkudikarisattan			

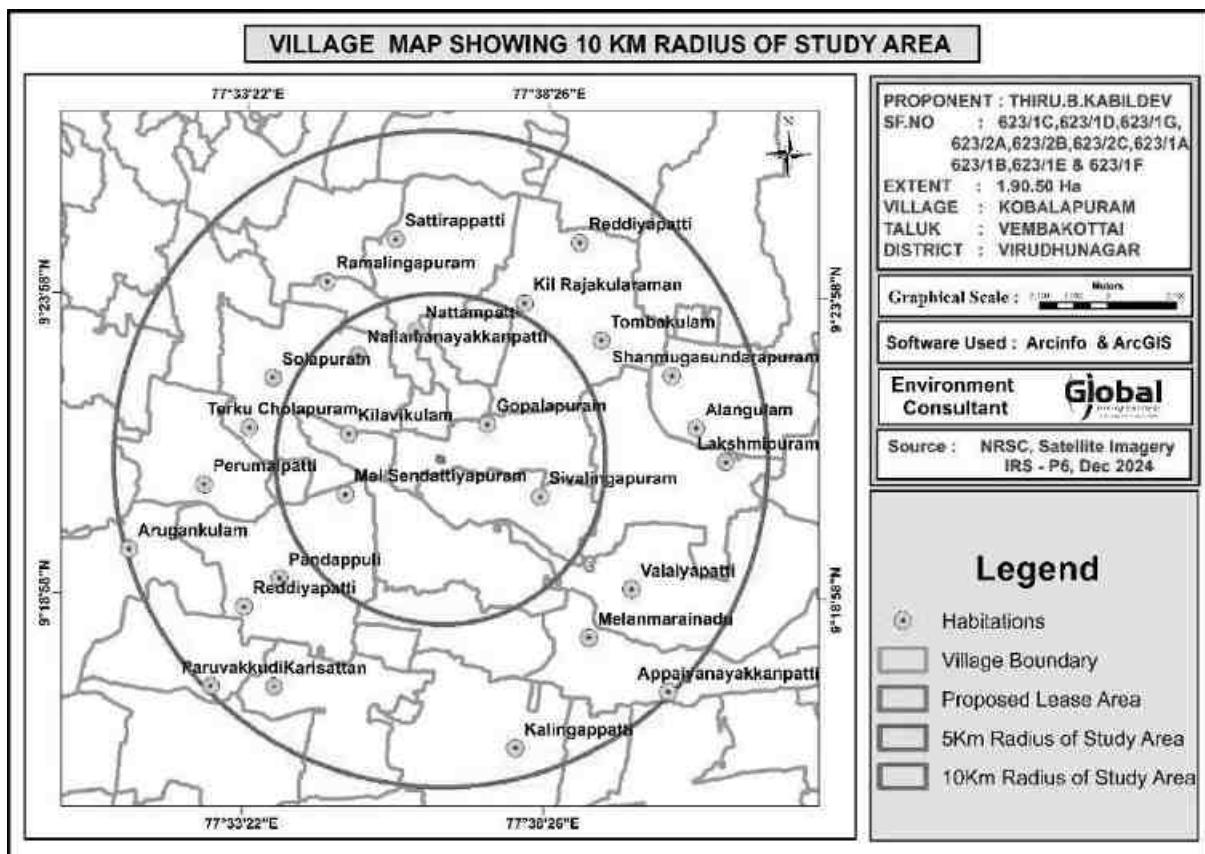


Figure 3.19 Village Map of the Study Area

Table 3.18 - Population profile of the Study Area

Population profile of the Study Area		
Particulars	No of Population	Percentage (%)
A. Population break-up by Gender		
Male Population	35889	49.64
Female Population	36407	50.36
Total	72296	100
B. Population break-up by Caste		
Scheduled Caste	5104	7.06
Scheduled Tribes	60	0.08
Others	67132	92.86
Total	72296	100
C. Literacy Level		
Male Population	25869	35.78
Female Population	20884	28.88
Others	25543	35.33
Total Literate Population	72296	100
D. Occupational structure		
Main Workers	20087	27.16
Marginal Workers	1446	1.51
Total Workers	22763	28.66
Total Non-Workers	12734	16.38
Other Workers	15266	26.30
Total	72296	100

Basic Amenities

A better network of physical infrastructure facilities (well-built roads, rail links, irrigation, power and telecommunication, information technology, market-network and social infrastructure support, viz. health and education, water and sanitation, veterinary services and co-operative) is essential for development of the rural economy. All basic amenities Education (higher education, colleges, universities, Medical college, Transport facilities, Railway station, Bus station are available.

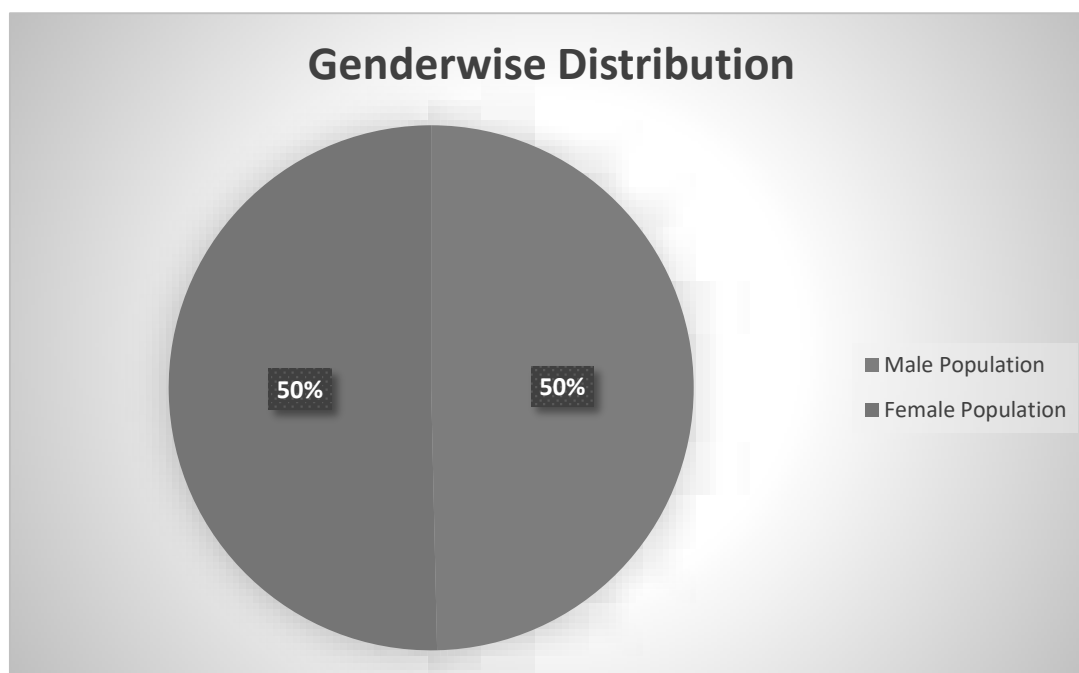


FIG 3.20 GENDER-WISE POPULATION DISTRIBUTION

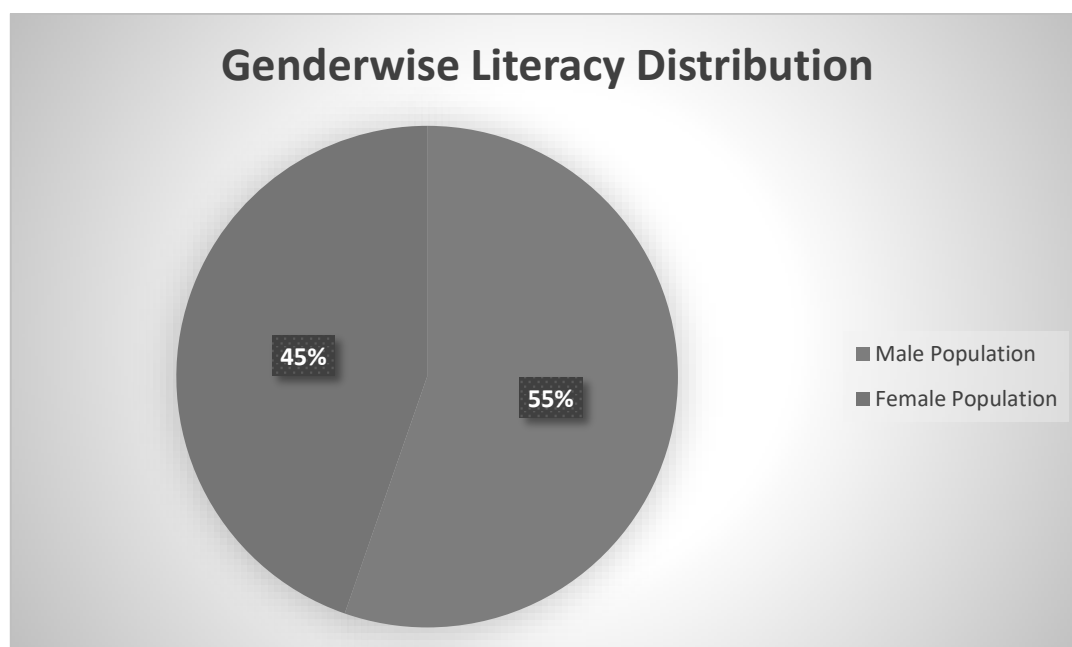


FIG 3.21 GENDER WISE LITERACY DISTRIBUTION

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

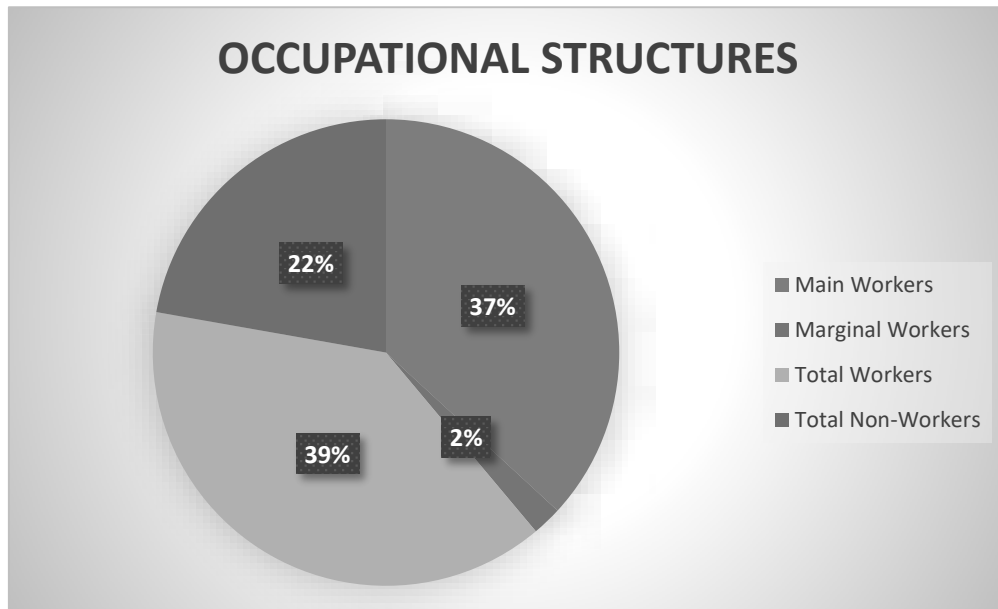


FIG 3.22 OCCUPATIONAL STRUCTURE WITHIN BUFFER ZONE

4.0 ANTICIPATED ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

4.1 GENERAL

Environmental impacts both direct and indirect on various environmental attributes due to cluster quarries will be created in the surrounding environment, during the operational and post-operational phases. The occurrence of mineral deposits, being site specific, their exploitation, often, does not allow for any choice except adoption of eco-friendly operation. The methods are required to be selected in such a manner, so as to maintain environmental equilibrium ensuring sustainable development.

In order to maintain the environmental commensuration with the mining operation, it is essential to undertake studies on the existing environmental scenario and assess the impact on different environmental components. This would help in formulating suitable management plans sustainable resource extraction.

4.2 PROJECT SPECIFIC IMPACTS AND MITIGATION MEASURES

This is a proposed project and Mechanized Open Cast mining will be carried out to quarry out Rough Stone & Gravel Quarry. The identified impacts during mining and associated activities have been studied in relation to various environmental components like Air, Water, Noise, Vibration, Land, Transport etc., and the details of the same are elaborated in this chapter. The impact assessment is done for the peak production of the mine lease period and the entire area of quarry operation and can be construed as applicable for the entire lease period. Based on the baseline environmental status at the project site, the environmental factors that are likely to be affected (Impacts) are identified, quantified and assessed.

The following parameters are of significance in the Environmental Impact Assessment and are being discussed in detail in this chapter.

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

- Land environment
- Soil environment
- Water Environment
- Air Environment
- Noise Environment
- Socio economic environment
- Biological Environment

The proposed mining activity is small and not likely to have any serious impacts on the existing environment of the area. However, the potential impacts of the proposed mining and related activities on various environmental parameters are discussed.

4.2.1 LAND ENVIRONMENT

4.2.1.1 ANTICIPATED IMPACT

The main anticipated impact on the Land Environment due to quarrying operation is change in Landscape, change in Land – use Pattern.

The entire mine lease area of 1.90.50 Ha. is Patta land. The project area of 1.46.00 Ha is proposed to be altered by effective quarrying operation such as excavation (1.46.0 Ha), Infrastructure (0.01.0 Ha), Road (0.01.0 Ha) and greenbelt (0.42.50 Ha). The ultimate depth of quarrying is proposed by formation of 1 pit with maximum depth of 45 m below the ground level and will not intersect the ground water table. The mineable Plan & Section is given in Figure 2.8. The present land use pattern and the post mining land use pattern is shown below.

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

Table 4.1 Land use pattern of the project site

Sl. No	Land Use	Present Area (Ha)	Area in use during the quarrying period (Ha)
1.	Quarrying Pit	Nil	1.46.00
2.	Infrastructure	Nil	0.01.00
3.	Roads	Nil	0.01.00
4.	Green Belt	Nil	0.42.50
5.	Unutilized	1.90.50	Nil
Total		1.90.50	1.90.50

Change in topography of the mine lease area will change at the end of the life of the mine.

At the end of life of mine, the excavated mine pit / void of 1.46.0 Ha. will act as artificial reservoir for collecting rain water and helps to meet out the demand or crises during drought season.

After mine closure the greenbelt (0.42.50 Ha.) will be developed along the safety barrier and top benches and 0.02 ha are approach road and Infrastructure.

Problems to agricultural land and human habitations due to dust, and noise caused by movement of heavy vehicles.

Degradation of the aesthetic environment of the core zone due to quarrying.

Soil erosion and sediment deposition in the nearby water bodies due to earthworks during the rainy season.

Siltation of water course due to wash off from the exposed working area.

4.2.1.2 MITIGATION MEASURES

In the rough stone & Gravel quarrying operation, land degradation is minimal. After completion of the quarrying operation, the land will be allowed to collect

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

rainwater, this rough stone & Gravel Quarry does not produce any toxic effluents in the form of solids, liquids, or gases.

It is a simple quarrying operation where 100% of stones will be removed systematically, according to the approved Mining Plan.

The periphery of the mining lease area will be converted to a greenbelt to prevent Noise and sound propagation to the nearby lands.

Entire mined out area will be properly fenced to prevent inadvertent entry of human and animals.

Since the entire material from the quarry face will be directly dispatched to the consumers, there will not be any stockpiles. There are no waste dumps in this quarry. As such there will not be any wash out due to stock pile or waste dumps. To manage surface runoff, garland drain will be constructed around the quarry and connected to a settling pond with silt traps.

In terms of aesthetics, natural vegetation surrounding the quarry will be retained (A safety distance of 7.5m has been provided to the adjacent Patta lands and as per Condition No.2, A safety distance of 10m for Cartrack and Odai is maintained passing on Northern and Eastern side situated in S.F.No.611 and S.F.No.624 from the lease applied area and the same will be complied during the quarrying operations) so as to help minimize dust emissions.

4.2.2 SOIL ENVIRONMENT

4.2.2.1 ANTICIPATED IMPACT

Mining activities often disrupt the existing environment as they involve disturbing the untouched earth materials. There is no overburden generation from this quarry operation, entire mined out mineral will be dispatched to needy customer directly. Extracted fine material can result in substantial sediment loading to surface waters

and drainage ways. During rainy season surface run off may cause sedimentation in low lying areas.

4.2.2.2 MITIGATION MEASURES FOR SOIL EROSION AND SOIL CONSERVATION

- Runoff water will be collected in bottom of the quarry and used for plantation and dust suppression during dry season. no run off water will be discharged beyond lease area.
- Wet drilling and haul road water sprinkling will be carried out to minimize air born dust at source level, which may cause soil pollution due to sedimentation.
- Garland drains will be constructed around the project area with silt traps to control the soil erosion during rainy seasons.
- Greenbelt development (0.42.50 Ha.) all along the periphery of the project area (i.e., 7.5 m and 10 m safety barrier) will ensure binding strength and minimizes soil erosion.
- Soil sampling will be carried out in the core zone for every season to ensure the soil quality is not affected due to the quarrying activities.
- Monitoring and maintenance – Weekly monitoring and daily maintenance of erosion control systems so that they perform as specified specially during rainy season.

4.2.3 WATER ENVIRONMENT

4.2.3.1 ANTICIPATED IMPACT ON SURFACE AND GROUND WATER

The impact due to quarrying on the water quality is expected to be insignificant because of no use of chemicals or hazardous substances during quarrying process. The quarrying activity will not intersect ground water table as quarrying is proposed upto a depth of 45 BGL and the water table is found at a depth of 68m in summer and 65 m in rainy seasons.

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

No major river is found nearby the lease-applied area. Odai – Adjacent to Eastern Side (10m Safety Maintained), Tank – 420m (S) Solasseri River – 1.3 km (SW) Cholapuram River – 2.1 km (W) Odai – 2.5 km (NE). No other water bodies close to the project site. There is no proposal for discharging of wastewater outside the project area. There is no proposal for a rough stone & Gravel Quarry processing or workshop within the project area. So, no effluent is anticipated in the mine.

During rainy season rain water will be collected in the quarry pit and later used for greenbelt development and for the water sprinkling in the haul roads.

4.2.3.2 ANTICIPATED IMPACT DUE TO WATER USE IN MINE'S

The total water requirement for the project will be 3.9 KLD comprising Drinking 1.2 KLD, Dust suppression 1.5 KLD and Greenbelt 1.2 KLD. The water will be sourced initially from outside agencies. Later the rainwater collected in the mine pit sump will be used for this purpose. The water balance diagram for the same is shown in Figure No 4.1.

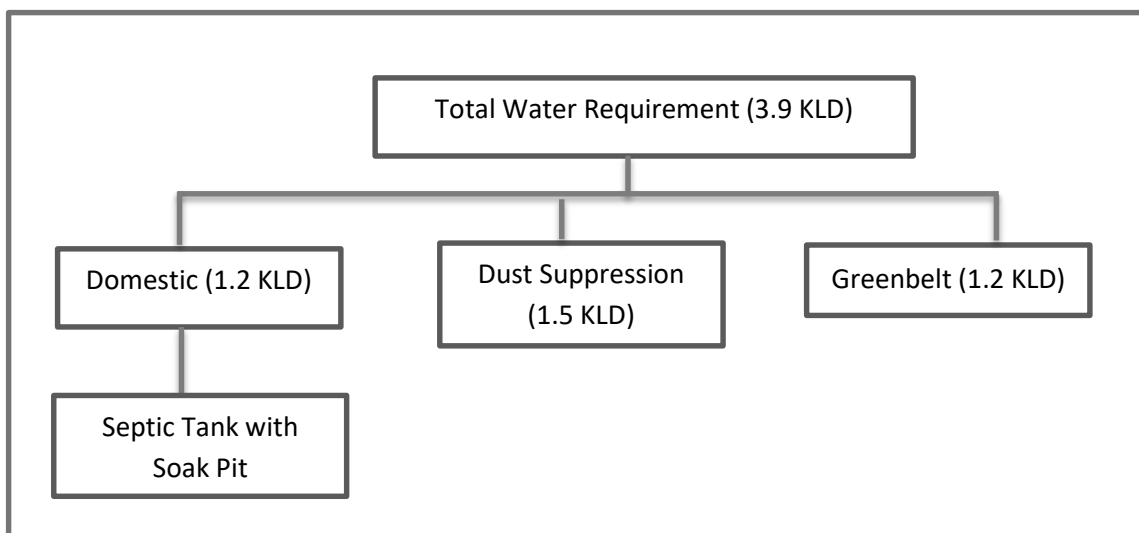


Figure 4.1 Water Balance Diagram

4.2.3.3 MITIGATION MEASURES

The following mitigation measures are suggested for water management

Rainwater will be collected in lower part of the quarry pit by construction of garland drains to divert surface run-off and will be connected to settling tank to allow suspended solids to settle down if any. This collected water will act as a rain water harvesting system and will be used for dust suppression and greenbelt development.

Regular water quality will be carried in nearby villages to ensure the water quality is not affected due to the quarrying activities.

Domestic sewage from site office & urinals/latrines provided in project area will be discharged through septic tank followed by soak pit system.

Only clear and settled water free from silt content will be used for dust suppression and greenbelt development.

De-silting will be carried out before and immediately after the monsoon season and the settling tank and drains will be cleaned weekly, especially during monsoons.

4.2.3.4 RAINWATER HARVESTING PLAN

Since the lease proximate areas are with less water potential and the rainwater is the major source for replenishment of ground water, effective rainwater harvesting and other water augmentation measures are proposed in this project.

- Development of garland drain around the quarry connected to settling tank.
- Cleaning of drain periodically to prevent siltation
- The supernatant clear water from the settling pond will drain into the nearby channel on the eastern side of the lease.
- Utilizing the rainwater harvested in the mine pit to meet the water requirement of the project.

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

The average annual rainfall of the area is 1030 mm. Taking into consideration of 0.35 as runoff co-efficient for mining area, the total quantity of rain water can be harvested per annum from the area has been tabulated as below.

Table 4.2 – Rainwater Harvesting Plan

S.NO	Rainwater Harvesting Area	Area in Sq.m	Average annual rainfall	Volume of harvestable quantity (Cum) of rain water per annum
1	Quarry Area	14600	1.0	5110
2	Unutilized Area	Nil	1.0	-
Total Harvested Rainfall				5110

Total surface water runoff is 5110 Cum per Annum. 10% of this amount will be evaporated and rest 4599 m³ will be recharged in the rain water harvesting pit.

Two sumps with each capacity 2500 Cu.m will be provided to harvest the rain water. The rain water stored in the pond will be utilized for plantation, dust suppression activities. The capacity of Rain water harvesting post will be sufficient to arrest the surface runoff from the lease area considering the highest amount of rain fall.

4.3 AIR ENVIRONMENT

4.3.1 IMPACT DUE TO MINING OPERATION

Impact prediction is a very important phenomenon in evaluating the environmentally potential adverse impacts for any proposed mine project. The impact prediction is always carried out under worst possible conditions so as to mitigate or to eliminate the environmental hazards. These predictions thus calculated are superimposed over the baseline data to calculate the net impact on the environment after the proposed mine Project comes into production.

4.3.2 IMPACT ON AIR ENVIRONMENT

The impacts on air environment from a mining activity depend on various factors like production capacity, machinery involved, operations and maintenance of various equipments and vehicle. Apart from these, there will be other activities associated viz transportation of mineral and waste, stocking facilities and dump management within the mine lease area that may contribute to pollution.

4.3.3 Quantitative Estimation of Impacts on Air Environment

An attempt has been made to predict the incremental rise of various ground level concentrations above the baseline status in respect of air pollution due to proposed is Thiru.Kapildev 2,44,440 m³ of rough stone & Gravel 72,930 m³ and cluster queries, Thiru. S.Murugesan 1,27,525 m³, S.Murugesan (2.89 Ha) 2,76,070 m³ rough stone & Gravel 1,02,222 m³, Thiru.P.Arumugam 2,35,300 m³ rough stone & Gravel 52,400 m³, Thiru.V.Rajmohan, 6,64,265 m³ rough stone & Gravel 1,58,417 m³ for a period of five years by the open-cast semi-mechanised mining method.

The pollutants released into the atmosphere will disperse in the down wind direction and finally reach the ground at farther distance from the source. The concentration of ground level concentrations mainly depends upon the strength of the emission source and micrometeorology of the study area.

In order to estimate the ground level concentrations due to the emission from the proposed project, EPA approved Industrial Source Complex ISC AERMOD View Model has been employed.

The mathematical model used for predictions on air quality impact in the present study is ISC-AERMOD View-6.8.6. It is the next generation air dispersion model, which incorporates planetary boundary layer concepts.

The AERMOD Cloud is actually a modeling system with three separate components:

AERMOD (AERMIC Dispersion Model), AERMAP (AERMOD Terrain Preprocessor) and AERMET (AERMOD Meteorological Preprocessor).

Special features of AERMOD include its ability to treat the vertical in homogeneity of the planetary boundary layer special treatment of surface releases, irregularly shaped area sources, a plume model for the convective boundary layer, limitation of vertical mixing in the stable boundary layer, and fixing the reflecting surface at the stack base.

The AERMET is the meteorological preprocessor for the AERMOD. Input data can come from hourly cloud cover observations, surface meteorological observations and twice-a-day upper air soundings. Output includes surface meteorological observations and parameters and vertical profiles of several atmospheric parameters.

The AERMAP is a terrain preprocessor designed to simplify and standardize the input of terrain data for the AERMOD. Input data include receptor terrain elevation data. Output includes, for each receptor, location and height scale, which are elevations used for the computation of airflow around hills.

Salient features of the AERMOD model are given hereunder

- ❖ Excavation operations are considered as area sources.
- ❖ Transportation of material on haulage roads has been considered as line source

The predicted ground level concentrations for study period computed using AERMOD model are plotted as isopleths.

4.3.4 Sources of Dust Emission

The proposed mining is carried out by semi mechanized opencast method. The air borne particulate matter generated by ore handling operations, transportation and screening of ore is the main air pollutant. The emissions of sulphur dioxide (SO₂), Oxides of Nitrogen (NO_x) contributed by diesel operated excavation/loading

equipment and vehicles plying on haul roads are marginal. Prediction of impacts on air environment has been carried out taking into consideration proposed production and net increase in emissions. Based on the various operations involved in the production of minerals, the various emission sources has been identified as given below.

a. Area sources.

b. Line sources.

Extraction of mineral from mine, are considered as area sources. Transportation of material from mining benches to various end points are considered as line sources. The impact of above sources on air environment is discussed below:

The other sources of air pollution are the dust generated during the movement of tippers on the haul road. Water tankers with spraying arrangement will be used for regular water sprinkling on the haul roads to ensure effective dust suppression. The tippers are well maintained so that exhaust smoke does not contribute abnormal values of noxious gases and un-burnt hydrocarbons.

4.3.5 Emission Details

All the emissions discussed above are quantified for proposed maximum production of Thiru.Kapildev 2,44,440 m³ of rough stone & Gravel 72,930 m³ and cluster queries, Thiru. S.Murugesan 1,27,525 m³, S.Murugesan (2.89 Ha) 2,76,070 m³ rough stone & Gravel 1,02,222 m³, Thiru.P.Arumugam 2,35,300 m³ rough stone & Gravel 52,400 m³, Thiru.V.Rajmohan, 6,64,265 m³ rough stone & Gravel 1,58,417 m³ by the open-cast semi-mechanised mining method. The existing air quality levels are covered in the baseline scenario.

Excavation, loading and transportation through tippers are the major sources, which are of significance. Therefore, the emissions considered for modeling are from drilling blasting, excavation & transportation rough stone and gravel.

The emissions are computed based on AP-42 emission factors. Operational hours, activity rate, wind speed and moisture content have been considered for estimation of emissions from point and area sources. For line source, apart from operational hours, activity rate, moisture, silt content and vehicle weight have been considered.

Predictions are carried out for the worst-case scenario of simultaneous operation of excavators (area sources) and tippers for transportation from mine pit to loading pit (line sources) over a distance of 500 m.

The number of working days has been taken at 300 days per year with 8 hours of operation/day, hence the concentrations predicted are considered to be the worst case. With control measures, the emissions have been taken at 30% of uncontrolled emissions for handling and 10% of uncontrolled emissions for transportation.

4.3.6 Meteorological Data

The meteorological data recorded continuously during the month of March – May 2025 on hourly basis on wind speed, wind direction and temperature has been processed to extract the 24- hourly mean meteorological data as per the guidelines of IMD and MoEFCC for application of AERMOD model. Stability classes computed for the mean hours is based on guidelines issued by CPCB on modeling. Mixing heights representative of the region have been taken from the available published literature.

4.3.7 Summary of Predicted Ground Level Concentrations

Ground level concentrations due to the mining activities have been estimated to know the incremental raise and extent of impact in the study area.

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

The maximum ground level concentration is estimated to be about $1.57 \mu\text{g}/\text{m}^3$ of $\text{PM}_{2.5}$ & $3.76 \mu\text{g}/\text{m}^3$ of PM_{10} within the mine area and cluster area is estimated to be about $2.18 \mu\text{g}/\text{m}^3$ of $\text{PM}_{2.5}$ & $6.04 \mu\text{g}/\text{m}^3$ of PM_{10} , where mining operations are being carried out. The impact of mining operations would be negligible beyond 0.4 km.

Figure – 4.2 to 4.5 represents the spatial distribution of the predicted ground level concentrations of $\text{PM}_{2.5}$ & PM_{10} due to emissions from mine.

4.3.8 Emission sources & Quantification

Various point and non-point sources of emissions from Proposed Rough Stone Quarry of Thiru.Kapildev is quantified and presented below:

(I) Area Emissions – Total Material handling (Rough Stone)

Quantity, TPA	Rough Stone: 2,44,440 m ³ Gravel 72,930 m ³ (Five Years)
Operational Hours Per Year	2400
Activity Rate, t/hr.	400.152
Emission of dust, g/t.	0.19
Emission of dust, g /hr.	51.52
Area of influence, m ²	624
Uncontrolled emission rate g/s/m ²	0.00046234
Controlled emission rate, PM ₁₀ g/s/m ²	0.0004623
Controlled emission rate, PM _{2.5} g/s/m ²	0.00030822

(II) Line Source – Transport of Rough Stone from Pit to Boundary

Quantity, TPA	Rough Stone: 2,44,440 m ³ Gravel 72,930 m ³ (Five Years)
Operational Hours Per Year	2400
Capacity of each Dumper (T)	10
Total No. of Tippers/ year	18980
Lead length/trip, Km	0.9
Total VKT/Year	75416
Emission Kg/VKT	0.20

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

Total emission Kg/Year	28143
Uncontrolled emission rate g/s/m	7.7404
Controlled emission rate, PM10 g/s/m	0.77404
Controlled emission rate, PM2.5 g/s/m	0.51230

(III) Area Emissions – Total Material handling (Cluster Rough Stone)

Quantity, m3	Proposed Quarries: Rough stone & Gravel - Thiru.Kapildev 2,44,440 m3 of rough stone & Gravel 72,930 m3 - Thiru. S.Murugesan 1,27,525 m3 - S.Murugesan (2.89 Ha) 2,76,070 m3 rough stone & Gravel 102222 m3 - Thiru.P.Arumugam 2,35,300 m3 rough stone & Gravel 52,400 m3 - Thiru.V.Rajmohan, 6,64,265 m3 rough stone & Gravel 1,58,417 m3
Operational Hours Per Year	2400
Activity Rate, t/hr.	365.52
Emission of dust, g/t.	0.27
Emission of dust, g /hr.	73.152
Area of influence, m2	622
Uncontrolled emission rate g/s/m2	0.00074253
Controlled emission rate, PM10 g/s/m2	0.0007425
Controlled emission rate, PM2.5 g/s/m2	0.0006142

(IV) Line Source – Transport of Rough Stone (Cluster)

Quantity, m3	Proposed Quarries: Rough stone & Gravel - Thiru.Kapildev 2,44,440 m3 of rough stone & Gravel 72,930 m3 - Thiru. S.Murugesan 1,27,525 m3 - S.Murugesan (2.89 Ha) 2,76,070 m3 rough stone & Gravel 102222 m3

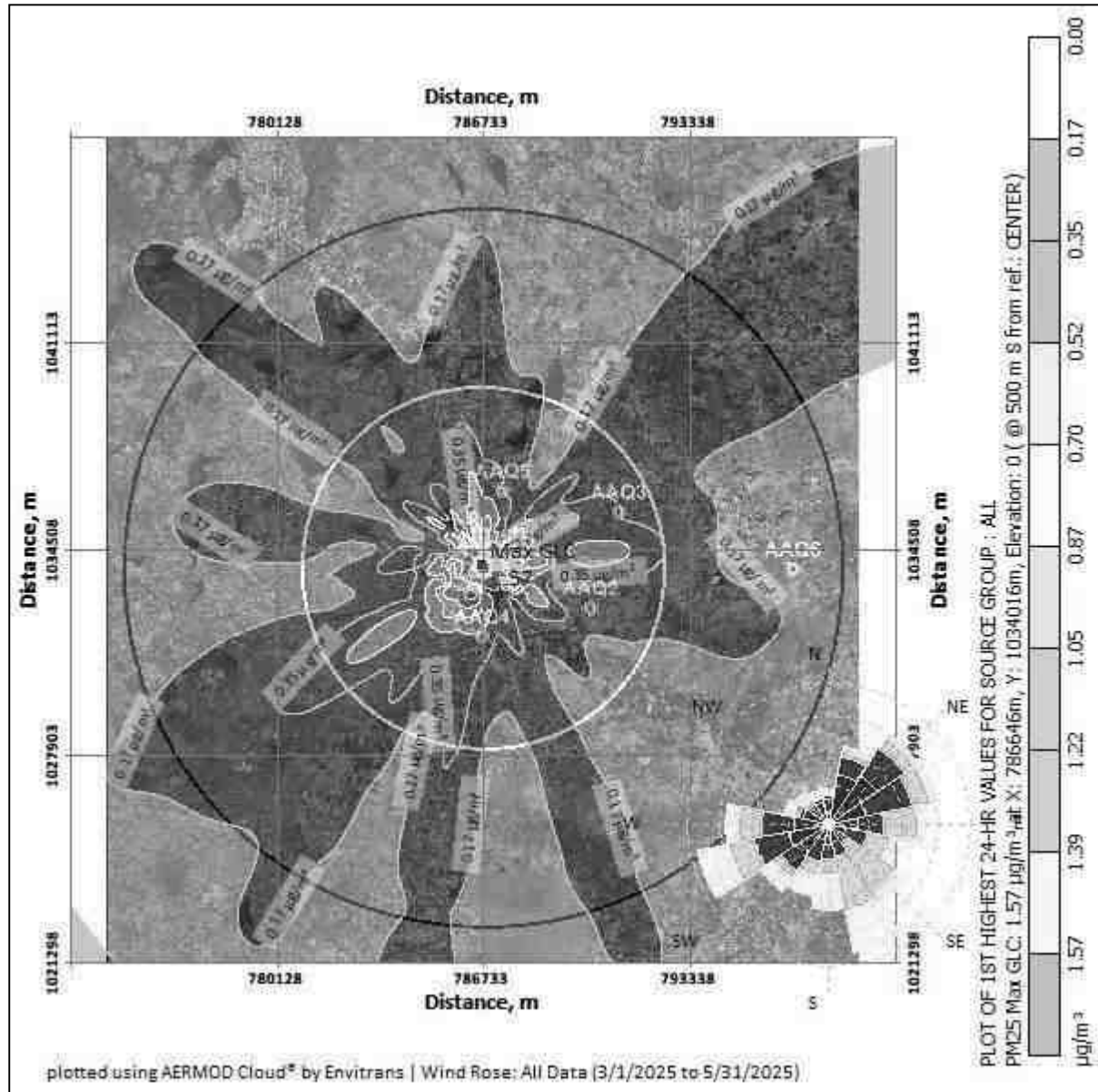
DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

	• Thiru.P.Arumugam 2,35,300 m³ rough stone & Gravel 52,400 m³ • Thiru.V.Rajmohan, 6,64,265 m³ rough stone & Gravel 1,58,417 m³
Operational Hours Per Year	2400
Capacity of each Dumper (T)	10
Total No. of Tippers/ year	121545
Lead length/trip, Km	0.18
Total VKT/Year	685274
Emission Kg/VKT	0.20
Total emission Kg/Year	18242
Uncontrolled emission rate g/s/m	6.1252
Controlled emission rate, PM10 g/s/m	0.61252
Controlled emission rate, PM2.5 g/s/m	0.54235

Note: *Emission factor computed based on wind speed of 2 m/s, and moisture content of 10 %. + Emission factor computed based on silt content of 10 % and moisture content of 10 %.

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

FIG 4.2 Isopleth of GLC Prediction for PM_{2.5}



DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

FIG 4.3 Isopleth of GLC Prediction for PM₁₀

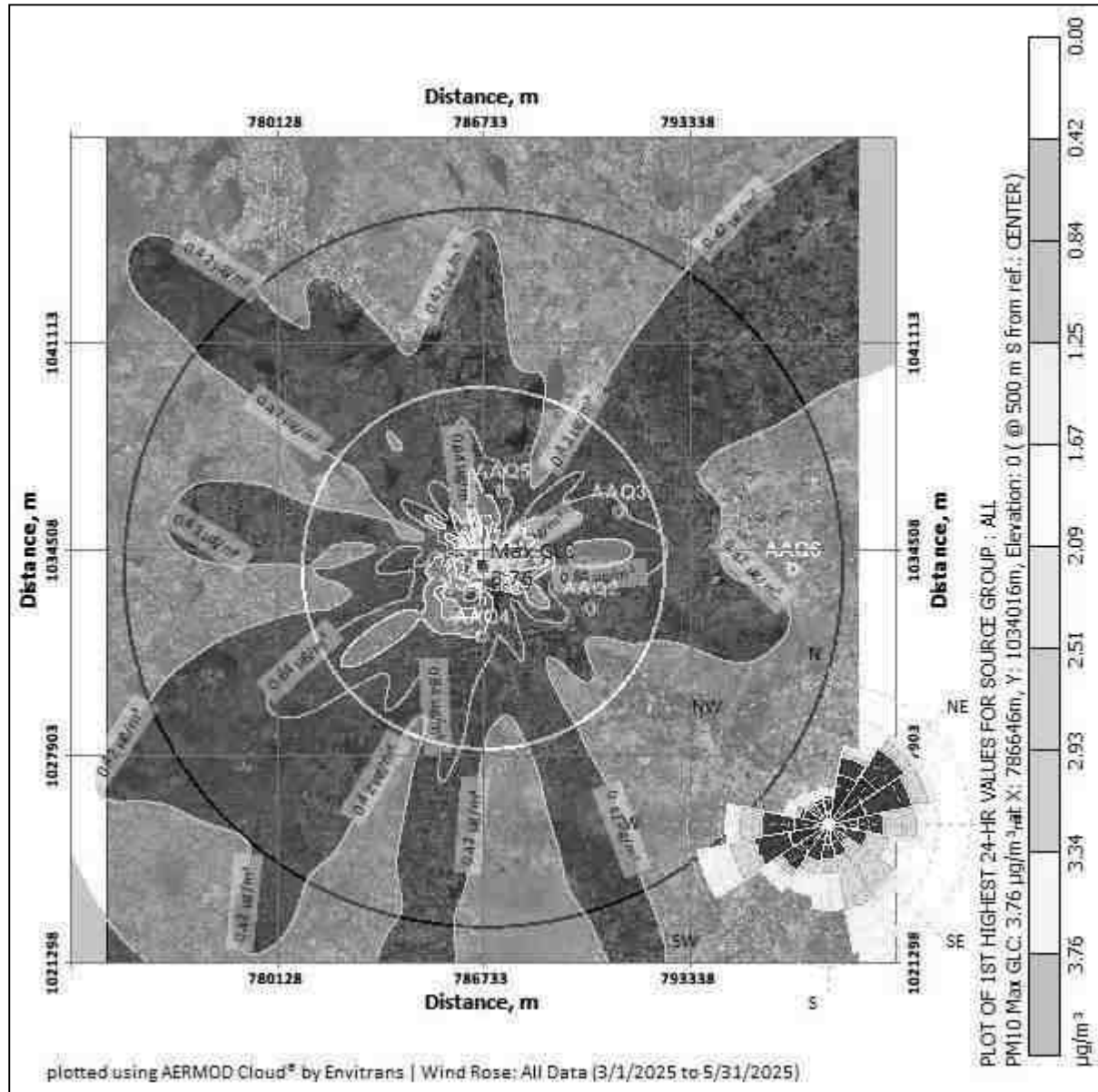


FIG 4.5 Isopleth of GLC Prediction –Cumulative for PM₁₀



DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

PREDICTED AMBIENT AIR QUALITY

The post project Concentrations of PM₁₀, PM_{2.5}, (GLC) (base line + incremental) after adopting necessary control measures is given in Table 4.3 to 4.6.

Table 4.3 Concentrations of PM2.5 after Project Implementation					
SL.No	Location	Background Concentration	Predicted incremental Concentration	Post Project Concentration	Statutory Limits in µg/m³
1	Project Location	37.0	1.57	38.57	60
2	Sivalingapuram	29.4	1.39	30.79	
3	Ananthappanaickerpatti	31.9	1.22	33.12	
4	Tenkarai	30.2	1.05	31.25	
5	Varangunaramapuram	27.4	<1.0	28.4	
6	A. Lakshmipuram	24.3	<1.0	25.3	
Table 4.4 Cluster Concentrations of PM2.5 after Project Implementation					
SL.No	Location	Background Concentration	Predicted incremental Concentration	Post Project Concentration	Statutory Limits in µg/m³
1	Project Location	37.0	2.18	39.18	60
2	Sivalingapuram	29.4	1.94	31.34	
3	Ananthappanaickerpatti	31.9	1.70	33.60	
4	Tenkarai	30.2	1.45	31.65	
5	Varangunaramapuram	27.4	1.21	28.61	
6	A. Lakshmipuram	24.3	< 1.0	25.30	
Table 4.5 Concentrations of PM10 after Project Implementation					
SL.No	Location	Background Concentration	Predicted incremental Concentration	Post Project Concentration	Statutory Limits in µg/m³
1	Project Location	76.0	3.76	79.76	100
2	Sivalingapuram	60.6	3.34	63.94	
3	Ananthappanaickerpatti	67.7	2.93	70.63	

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

4	Tenkarai	61.9	2.51	64.41	
5	Varagunaramapuram	55.1	2.09	57.19	
6	A. Lakshmipuram	51.6	1.67	53.27	
Table 4.6 Cluster Concentrations of PM10 after Project Implementation					
SL.No	Location	Background Concentration	Predicted incremental Concentration	Post Project Concentration	Statutory Limits in $\mu\text{g}/\text{m}^3$
1	Project Location	76.0	6.04	82.04	100
2	Sivalingapuram	60.6	5.37	65.97	
3	Ananthappanaickerpatti	67.7	4.69	72.39	
4	Tenkarai	61.9	4.02	65.92	
5	Varagunaramapuram	55.1	3.35	58.45	
6	A. Lakshmipuram	51.6	2.68	54.28	

The above report seems that, even in the worst-case scenario, the resultant added concentrations with baseline figures show that the values of ambient air quality for PM_{10} are in the range of $53.27 \mu\text{g}/\text{m}^3$ to $79.76 \mu\text{g}/\text{m}^3$ and for $\text{PM}_{2.5}$ are in the range of $25.3 \mu\text{g}/\text{m}^3$ to $38.57 \mu\text{g}/\text{m}^3$ and PM_{10} are surrounding area range of $54.28 \mu\text{g}/\text{m}^3$ to $82.04 \mu\text{g}/\text{m}^3$ and for $\text{PM}_{2.5}$ are in the range of $25.30 \mu\text{g}/\text{m}^3$ to $39.18 \mu\text{g}/\text{m}^3$ which are within the statutory limits in each case. The mitigation measures undertaken in the mine for control of air pollution are given below.

- Wet drilling will be practiced in drilling operation.
- Water sprinkling will be done in haul roads & loading etc.
- The mines workers are provided with the dust masks.
- Three-layer plantation in the safety zone.

DG sets shall be periodically maintained as per manufacturer's specifications.

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

Table 4.7 Mitigative Measures for Air Environment

S.NO	Activity	Consequence	Mitigative Measures
1	Drilling	Dust Emission	Usage of wet drilling
			Covering of drill holes with wet cloth
			Usage of sharp drill bits for drilling of holes.
			Provision of dust mask to workers working at highly dust prone and affected areas.
2	Blasting	Prompt dust emission	Well-designed blasting parameter, effective stemming to achieve optimum breakage occurs without generating fines.
			Use of appropriate explosives for blasting and avoiding overcharging of blast holes.
			Avoiding blasting during high wind periods where the fine dust is carried out away easily affecting the ambient air quality.
			Use of controlled blasting techniques with milli second delay detonators to keep the dust generation, noise as well as vibration level within the prescribed limits.
3	Excavation and Loading	Dust emission, Gaseous Emission	Proper maintenance of HEMM will be carried out to minimize dust and gaseous emission at the source level.

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

			Water sprinkling will be carried out at excavation and loading area.
			Imparting sufficient training to operators on safety and environmental parameters.
			Avoiding overloading of dumpers.
4	Transportation	Dust emission, Gaseous Emission	Regular wetting of transport road using mobile water tanker.
			Proper maintenance of haul road and other roads
			Avoiding overloading of tippers
			Covering of loaded tippers with tarpaulins during transportation
			Vehicular emissions will be controlled through regular and proper preventive maintenance only PUC valid vehicles will be used for transportation.
5	Greenbelt	Dust emission, Gaseous Emission	Development of greenbelt / barriers around mine in the safety zone and carrying out plantation within the lease area.
6	Occupation Health	Dust emanation, Gaseous Emission	Dust mask will be provided to the workers and their use will be strictly monitored

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

			Annual medical checkups, trainings and campaigns will be arranged to ensure awareness about importance of wearing dust masks among all mine workers & tipper drivers
			Ambient Air Quality Monitoring will be conducted six months once to assess effectiveness of mitigation measures proposed.

4.4 NOISE ENVIRONMENT

The ambient noise levels in the study area have been discussed in Chapter - 3. The data shows that the existing noise levels are within statutory limits. The impact prediction and control measure for noise environment due to mining and allied activities is described below:

4.4.1 IMPACT DUE TO NOISE AND VIBRATION

The main noise generating source during mining operation and related activities are drilling, excavation, loading, unloading and transportation. Intermittent noise is generated due to operation of diesel generator.

Table 4.8 - The likely noise level in the lease area

SL.No	Source Name	Noise Level in dB (A)
1	Diesel generator	102
2	Excavator Operation	95
3	Trucks movement	95
4	Drilling	105
5	Blasting	120

4.4.2 MITIGATION MEASURES FOR NOISE CONTROL

The following noise mitigation measures are proposed for control of Noise

- Usage of sharp drill bits while drilling which will help in reducing noise;
- Secondary blasting will be totally avoided and hydraulic rock breaker are utilized for breaking boulders;
- Controlled blasting with proper spacing, burden, stemming and optimum charge/delay will reduce noise;
- The blasting will be carried out during favourable atmospheric condition and less human activity timings by using nonelectrical initiation system;

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

- Proper maintenance, oiling and greasing of machines will be done every week to reduce generation of noise;
- Provision of sound insulated chambers for the workers working on machines (HEMM) producing higher levels of noise;
- Green Belt will be developed around the project areas and along the haul roads. The plantation minimizes propagation of noise;
- Personal Protective Equipment (PPE) like ear muffs/ear plugs will be provided to the operators of HEMM and persons working near HEMM and their use will be ensured through training and awareness.
- Regular medical check-up and proper training to personnel to create awareness about adverse noise level effects

4.4.2 GROUND VIBRATION

The vibration due to blasting can cause damage to the nearby structures if appropriate technology and control measures are not adopted in the blasting operation. Fly rock is another possible damage causing outcome of blasting. There are many factors which influence fly rock during blasting. Most important of these factors are long explosive column with little stemming column, improper burden, loose material or pebbles near the holes and long water column in the hole.

Mitigative Measures

- Proper quantity of explosive, suitable stemming materials and appropriate delay system should be adopted to avoid overcharging and for safe blasting;
- Adequate safe distance from blasting should be maintained as per DGMS guidelines;
- Blasting shelter should be provided as per DGMS guidelines;
- Blasting operations shall be carried out only during day time;
- The charge per delay shall be minimized and preferably more number of delays will be used per blasts;
- During blasting, other activities in the immediate vicinity shall be temporarily stopped;

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

- Drilling parameters like depth, diameter and spacing will be properly designed to give proper blast;
- Blasting will be carried out under the supervision of statutory persons as approved by DGMS.
- A well-defined SOP will be framed under the leadership of top management and the same will be followed for each blasting.
- Regular PPV monitoring will be carried out to ensure PPV limits i.e., 0.5 mm/s.

4.4.3 BIOLOGICAL ENVIRONMENT

The details and list of flora, fauna, reserved forest and cropping pattern within the 10km radius of study area is given in chapter 3. The impact on ecology and biodiversity due to the proposed mining activity has to be studied in detail to prepare the management plan to safeguard the flora, fauna, forest products and aquatic living organism etc.

A detailed anticipated impact of Ecology and Biodiversity due to mining activity is described in below Table.

Table 4. 9 Ecological Impact Assessments and Its Mitigations -Part 1

S.NO	Issues	Assessment	Mitigations
1	Proximity to national park/ wildlife sanctuary / reserve forest / mangroves / coastline/estuary/se a	There are no R.F. and National park/ Sanctuary within 10 km radius. The proposed project does not attract Forest Conservation Act, 1980 and the area does not attract Wildlife Protection Act, 1972 and C.R.Z. Notification, 1991.	The fugitive dust generated by the mining activity will be suppressed by frequent sprinkling of water based on evaporation rate in the site specific.
2	Activities of the project affects the breeding/nesting	No breeding and nesting site was identified in mining lease site. The fauna sighted mostly migrated from buffer area. The fauna in the buffer zone may	The noise due to the mining activity will be controlled by developing green belt all along the lease

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

	sites of birds and animals	be affected by noise generated due to mining activity.	boundary, regular maintenance of tippers, excavators, transporting the tippers within speed limits.
3	Located near an area populated by rare or endangered species	No endangered, critically endangered, vulnerable species sighted in core mining lease area and also in buffer zone.	NIL
4	Proposed project restricts access to waterholes for wildlife	No waterholes are in core zone. No Wild life sanctuary within 10km radius.	NIL
5	Proposed mining project impact surface water quality that also provide water to wildlife	„NO“ scheduled or threatened wildlife animal sighted regularly in core area. There is no proposal for discharge of wastewater to nearby water bodies.	NIL
6	Proposed mining project increase siltation that would affect nearby Biodiversity area.	Surface runoff management structures like garland drain, settling pond etc. as explained above will be constructed and as such there will not be any appreciable impact on surface water quality which in turn can affect the bio diversity of the area.	
7	Risk of fall/slip or cause death to wild animals due to project activities	In the post mining stage, wire fencing is proposed all around the mined-out void to prevent falling of animals in the mine pits.	
8	The project release effluents into a water body that also supplies water to a wildlife	As the proposed project is mining activity there will be no possibilities of release of effluents. Also, no Wild life sanctuary within 10km radius.	NIL
9	Mining project effect the forest-based livelihood/ any specific forest production which local livelihood depended	There are no R.F within 10 km radius. So, the proposed mining activity does not affect forest and forest products.	NIL
10	Project likely to affect migration routes	No migration route observed during monitoring period.	NIL
11	Project likely to affect flora of an area, which have medicinal value	No such significantly important medicinal value species within the ML area and its nearby region.	NIL

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

12	Forestland is to be diverted, has carbon high sequestration	„NO“. There is no forest land within the lease area.	NIL
13	The project likely to affect wetlands, fish breeding grounds, marine ecology	‘NO“. No wetland, fish breeding grounds, marine ecology present in core mining area.	NIL

(Format Source: EIA Guidance Manual-Mining and Minerals, 2010)

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

Table 4.13 Ecological Impact Assessments and Its Mitigations -Part 2

Identified Impacts	Ecological Significance of impact	Magnitude	Phase / duration	Reversibility	Mitigation
Project site Habitat due to Site Clearance.	There are no trees in the core zone. The Mining activity will be carried within the lease area. No clearance of vegetation in the buffer zone	Low impact	Planning stage	Irreversible	The quarried-out pit will be used as water storage pond which increases agricultural activity in the buffer zone.
Impact on Surrounding habitat due to fugitive emission	The fugitive emission due to the mining activities such as drilling, blasting, loading and transportation on the haul road will be deposited on the flora and crop field in the buffer zone which affects growth and its productivity.	Temporary Impact	Operational stage	Reversible	The sprinkling of water over the haul road will be done. Then completely wet drilling will be take place. The transportation vehicles will be maintained and serviced Properly.
Road construction	No Road construction is required to assess the project site. The existing internal Road connects the project site to the existing SH and NH	No Impact	-	-	-
Ecological Impact on Surrounding/ Eco sensitive habitat due to waste water generated from the project activity.	Since the proposed project is a mining activity no waste water generation is expected. Sewage will be generated due to the workers	No impact	-	-	-
Ecological Impact on Surrounding / Eco sensitive habitat due	During drilling or blasting, transportation of rough stone & Gravel Quarry, noise will be	Temporary impact	Only during drilling, blasting	NO	Avenue trees will be planted along the lease area to minimize the noise level. Milli

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

to Noise generated from the project activity.	generated and it may slightly affect the movement of fauna around the lease area.		operation and transportation period. (5 years)		second detonators shall be used preferably 25–50ms per delay to control vibrations. Regular maintenance of vehicles and driving the tipper within specified limits also control the noise generations.
Ecological Impact on Surrounding/ Eco sensitive habitat due to Transportation	There is no eco sensitive habitat found around the lease area. The fugitive emission from drilling, blasting, vehicle movement will form layer in leaves thus reducing the gaseous exchange process. This ultimately affects the growth of plants. The animals like dog, cattle may get accident due to truck movement.	Temporary impact	During Operation Phase	NO	The truck driver will be advised to drive the vehicle within 20km/hr inside the lease area and 40km/hr outside the lease area. The sprinkling of water over the haul road will be done. Then completely wet drilling will be take place.

4.4.3.1 MITIGATION MEASURES

- Necessary mitigative measures like dust suppression, proper maintenance of equipment's, roads will be carried out to prevent dust generation.
- There is no proposal to discharge any effluent into nearby water bodies.
- Surface runoff management structures like garland drain, settling pond, protective bund etc. as explained above will be constructed and as such there will not be any appreciable impact on surface water quality which in turn can affect the bio diversity of the area.
- Construction of barbed wire fencing all around the boundary to prevent falling of animals in the mine pits.

Carbon Emission:

Carbon released from quarrying machineries and tippers during quarrying would be 185 kg per day, 55,664 kg per year and 5,56,654 kg over ten years, as provided in below Table.

Description	Per Day	Per year	For Ten Years
Total fuel consumption in liters	69	20,770	2,07,707
Co ₂ emission in kg	185	55,664	5,56,654

Carbon Sequestration:

To mitigate carbon emission due to mining activities and recommend planting trees around the quarry to offset the carbon emission. Fuel efficient machinery and optimize transportation routes to reduce emissions from diesel powered vehicles. Conduct regular vehicular emission tests for the transport vehicles to ensure minimal impact due to carbon emissions. To further mediate the carbon emissions, additional plantation will be carried out around the lease area.

4.4.3.2 GREENBELT DEVELOPMENT PLAN

In order to compensate the loss of vegetation cover, it is suggested to carry out afforestation program mainly in proposed mine lease area earmarked for plantation program as per Approved Mining Plan in different phases. This habitat improvement program would ensure the faunal species to re-colonize and improve the abundance status in the core zone. Greenbelt / Plantation will be carried out to enhance the vegetative growth and aesthetic in the safety zone area.

Table – 4.14 GREENBELT DEVELOPMENT PLAN

Year	No. of trees proposed to be planted	Survival %	Name of the Species	No. of trees expected to be grown
I	430	80%	Pongamia pinnata,	344
II	-	80%	Syzigium cumini,	-
III	-	80%	Albizia lebbeck,	-
IV	-	80%	Thespesia populnea,	-
V	-	80%	Bauhinia racemose, Cassia siamea, Azadirachta indica	-
Total	430	-	-	344

Nearly 0.42.50 Ha. of area is proposed for Greenbelt development by planting 430 Nos of trees during every year and expected growth is around 344 Nos @ survival rate of 80%.

The objectives of the green belt cover will cover the following:

- Noise abatement.
- Reuse of waste water to the extent possible.
- Prevention of soil erosion.
- Ecological restoration.
- Aesthetic, biological and visual improvement of area due to improved vegetative and plantations cover.

4.4.4 SOCIO – ECONOMIC

From the primary Socio-economic survey & through secondary data available from established literature and census data 2011, it is found that there would be positive impact on Socio-economic condition of the nearby area. There is no habitation within 300 m of the proposed mining lease area. Therefore, no major impact is anticipated on the nearby habitation during the entire life of the mine. The entire lease area is in the proponent's possession. Hence, there are no habitations or hutments in the core zone area and no rehabilitation or resettlement problems will arise here.

The mining operations in the proposed mine will employ about 16 persons directly and 12 people on indirect basis through allied opportunities in logistics, trading, repairing works etc. good employment potential will arise, which will provide raising income levels and standards of living in the area through various service related activities connected with the project operations as shown under.

- Project related logistical operations for transport of Rough Stone & Gravel Quarry, etc,
- Various trading services for consumer goods, spare parts, sundry items, etc.
- Contractual services connected with the project.
- Green belt and horticultural works in the project.
- Casual labor needs for various activities.

The State and the Central governments will also get benefited through financial revenues by way of royalty, tax etc from this project.

Mine management will contribute for the upliftment of these villages by conducting regular medical camps, assistance in developing necessary infrastructure facilities like maintenance of schools, village roads, drinking water supply, etc.

From above details, it is clear that the project operations will have highly beneficial positive impact in the area. However, towards the socio economic development of

the surrounding area, the proponent has earmarked an amount of Rs.5.0 Lakhs under Corporate Environmental Responsibility.

4.4.5 OCCUPATIONAL HEALTH AND SAFETY

Primary data collection through field survey conducted in the study area reveals that there is no reported incident of any occupational diseases in the area. Hazardous jobs like blasting, loading, etc. are planned to be executed safely and with all precautionary measures as prescribed in Metalliferous Mines Regulations of 1961, so as to minimize hazards and incidences of health problems.

Occupational health and safety hazards occur during the operational phase of mining and primarily include the following:

- Respiratory hazards
- Noise
- Explosive storage and handling
- Respiratory Hazards
- Long-term exposure to silica dust may cause silicosis the following measures are proposed:
 - Cabins of excavators and tippers will be enclosed with AC and sound proof
 - Use of personal dust masks will be made compulsory

Noise

Workers are likely to get exposed to excessive noise levels during mining activities.

The following measures are proposed for implementation

- No employee will be exposed to a noise level greater than 85 dB(A) for a duration of more than 8 hours per day without hearing protection
- The use of hearing protection will be enforced actively when the equivalent sound level over 8 hours reaches 85 dB(A), the peak sound levels reach 140 dB(C), or the average maximum sound level reaches 110 dB(A)

- Ear muffs provided will be capable of reducing sound levels at the ear to at least 85 dB(A)
- Periodic medical hearing checks will be performed on workers exposed to high noise levels

Occupational Health Survey

All the persons will undergo pre-employment and periodic medical examination as per DGMS and 12th National Mines Safety Council recommendation.

The PP will maintain occupational health history card for their Employees.

The PP will establish first aid station within project site.

Good Drinking Water specialty will be provided at the site level.

4.4.6 WASTE MANAGEMENT

4.4.6.1 SOLID WASTE

Since the entire mined out material will be utilized there will not be any solid waste generation from this project. However, the Solid waste (MSW) generated from administrative activities will be properly collected and disposed to Govt. Authorized yards / Re-cylers / Disposers.

4.4.6.2 LIQUID WASTE

There is no process effluent generation from this mine. Hence no liquid waste is generated. Domestic wastewater i.e 1.2 KLD will be discharged in soak pit via septic tank.

4.4.6.3 HAZARDOUS WASTE MANAGEMENT

In this project the following management practices will be followed:

In the quarrying operation, the source of hazardous waste is from machinery maintenance activities that are waste oil/ Waste lubricants / Used filters / Used Hydraulic hoses. The said hazardous waste are very negligible quantity , it will be properly collected in the source level, stored in impervious storage yards and

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

disposed off as per the Hazardous waste (Trans-boundary Movement) Management Rules, 2016.

4.4.6.4 PLASTIC WASTE

Single use plastics/ use and throwaway plastics will be banned in the site as directed by the Tamil Nadu Government vide GO(Ms)No.84 regarding ban on use of plastic products. The employees will be encouraged to use compostable material or reusable material.

5.0 ANALYSIS OF ALTERNATIVES (TECHNOLOGY AND SITE)

5.1 ALTERNATE TECHNOLOGY

The mining technology is mechanized open cast in single-shift operation without any change in technology. The operation will be carried out as per DGMS norms. No alternate technology will be used. Details of the technology used are given in Chapter 2.

5.2 ALTERNATE SITE

The project is a mining project and will be operated within the lease grant area. So, no alternate sites have been assessed. Since the resource (Rough stone & Gravel Quarry) is site-specific, the chosen location is the only site to carry out Rough Stone & Gravel Quarry.

6 ENVIRONMENTAL MONITORING PROGRAMME

6.1 GENERAL

The monitoring and evaluation of environmental parameters indicates potential changes occurring in the environment, which paves way for implementation of rectifying measures wherever required to maintain the status of the natural environment. Evaluation is also a very effective tool to judge the effectiveness or deficiency of the measures adopted and provides insight for future corrections.

The main objective of environmental monitoring is to ensure that the obtained results in respect of environmental attributes and prevailing conditions during operation stage are in conformity with the prediction during the planning stage. In case of substantial deviation from the earlier prediction of results, this forms as base data to identify the cause and suggest remedial measures. Environmental monitoring is mandatory to meet compliance of statutory provisions under the Environment (Protection) Act, 1986, relevant conditions regarding monitoring covered under EC orders issued by the SEIAA as well as the conditions set forth under the order issued by Tamil Nadu Pollution Control Board while granting CTE/CTO.

6.2 MONITORING MECHANISM

The PP will undertake effective monitoring and implementation of various environmental control measures promptly and effectively and to oversee various environmental management schemes for air quality control, water quality status, noise level control, plantation programme, social development schemes, etc in the mine.

6.3 OBJECTIVES OF ENVIRONMENTAL MONITORING

The objectives of Environmental Monitoring are as follows.

- ❖ Monitoring and analysis of air and water samples
- ❖ Implementing control and protective measures.

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

❖ Coordinating the environmental related activities within the project as well as with outside agencies. Collecting statistics of health of workers and the population of the surrounding villages. Green belt development etc.

❖ Monitoring the progress of the implementation of the Environmental Management Programme.

❖ Monitoring the noise generation in and around the project areas.

❖ Monitoring of wastewater treatment and disposal of solid waste.

❖ The laboratory will be suitably equipped for sampling/testing for various environmental pollutants.

6.4 ENVIRONMENTAL MONITORING SCHEDULE AND FREQUENCY

The monitoring schedules are planned for systematic study of various pollution levels with respect to air and water qualities, noise levels, etc. to ensure that they conform to the standards laid down by Environmental Protection Act and various statutory Limits. However, based on the need and priority it may be suitably modified / improved in consultation with local authorities. Monitoring may include socio-economic interaction, through local liaison activities or even assessment of complaints. The monitoring schedules to be adopted in this quarry are given below.

Table 6.1 Environmental Monitoring Schedule

S.NO	Environmental Attribute	Parameters to be monitored	Frequency
1	Air Quality	Air Quality for SPM, PM-10, PM 2.5, SO ₂ and NO _x	24 hour average samples once every 3 months
2	Water Quality	General, Physical, and chemical parameters	Once in season
3	Noise	Leq. Lmax Lmin, Leq Day & Leq Night dB (A)	8 hour average samples once every 3 months
4	Soil	Physical and Chemical Characteristics	Once in Season.

6.5 BUDGET FOR IMPLEMENTAION

The cost in respect of monitoring of environmental attributes, parameter to be monitored, sampling/monitoring locations with frequency and Monitoring work will be outsourced to external laboratory approved by NABL / MoEF. The capital and recurring cost required for the project are detailed in below table.

Total EMP Cost for 10 years is 35.22 lakhs i.e., 9.18 Lakhs of Capital Cost + 26.04 Lakhs of Recurring Cost for 10 Years. The breakup of EMP cost is elaborated in Table 10.2 of Chapter 10.

6.6 SUBMISSION OF PERIODICAL REPORTS

The monitored data on air quality, water quality, noise levels and other environmental attributes will be periodically examined by the Mine Management Coordinator and Respective Head of Organization for taking necessary corrective measures.

The monitoring data will be submitted to Tamil Nadu State Pollution Control Board in the Compliance to CTO Conditions & environmental audit statements every year to MoEFCC and Half-Yearly Compliance Monitoring Reports to MoEFCC Regional Office and SEIAA.

Periodical reports to be submitted to: -

- MoEFCC – Six month EC compliance report
- TNPCB - Half yearly CTO Compliance report
- MOEFCC & TNPCB – annual Environmental Statement Report. (Form – V)
- Annual Hazardous Waste Return (Form – IV)
- Department of Geology and Mining: quarterly, half yearly annual reports.

7 ADDITIONAL STUDIES

The following Additional Studies were done as per items identified by project proponent and the regulatory authority.

- Public Consultation
- Risk Assessment
- Disaster Management Plan
- Cumulative Impact Study
- Mine Closure Plan
- Slope Stability Plan

7.1 PUBLIC CONSULTATION

This draft EIA/EMP report will be exposed to public consultation as per mandatory procedures through the District Collector and State Pollution Control Board officials after giving 30 days advance notice in two local newspapers about the scheduled date and time for conduct of the public hearing procedures. The opinions, concerns and objections of stakeholders will be recorded during the public hearing. All the public queries and the replies to the query by the project proponent and officials concerned will be recorded and incorporated in the EIA/EMP report for approval by SEIAA, Tamil Nadu.

7.2 RISK ASSESSMENT

The DGMS risk assessment process is intended to identify existing and probable hazards in the work environment and all operations and assess the risk levels of those hazards in order to prioritize those that need immediate attention. Further, mechanisms responsible for these hazards are identified and their control measures, set to timetable are recorded along with pinpointed responsibilities.

The whole quarry operation will be carried out under the direction of a Qualified Competent person holding certificate of competency to manage a metalliferous mine granted by the DGMS. Factors of risks involved due to human induced activities in connection with this proposed mining & allied activity with detailed analysis of causes and control measures for the mine is given in below Table 7.1.

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

Table 7.1 Risk Assessment and Control Measures

S.NO	Risk Factor	Causes of risk	Control Measures
1	Accidents due to explosives and heavy mining machineries	Improper handling and unsafe working practice	All safety precautions and provisions of Mine Act, 1952, Metalliferous Mines Regulation, 1961 and Mines Rules, 1955 will be strictly followed during all mining operations. Entry of unauthorized persons will be prohibited. Fire-fighting and first-aid provisions in the mine office complex and mining area. Provisions of all the safety appliances such as safety boot, helmets, goggles etc. will be made available to the employees and regular check for their use. Quarry operation will be done as per approved mining plan and other applicable statutory guidelines issued by DGMS, Dept. of Mining & Geology-Tamil Nadu. Handling of explosives, charging and firing shall be carried out under competent statutory persons. A comprehensive standard operating procedure (SOP) will be prepared as per DGMS guidelines and the same will be circulated to all the employees and it will be strictly followed in the all face of mining operation.
2	Drilling	Improper and unsafe practices. Due to high pressure of compressed air, hoses may burst. Drill Rod may break.	Safe operating procedure established for drilling (SOP) will be strictly followed. Only trained operators will be deployed. No drilling shall be commenced in an area where shots have been fired until the blaster/blasting foreman has made a thorough Examination of all places.

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

			Drilling shall not be carried on simultaneously on the benches at places directly one above the other. Periodical preventive maintenance and replacement of worn-out accessories in the compressor and drill equipment as per operator manual. Drills unit shall be provided with wet drilling to ensure efficient working.
3	Blasting	Fly rock, ground vibration, Noise and dust. Improper charging, stemming & Blasting/ fining of blast holes. Vibration due to movement of vehicles.	Restrict maximum charge per delay as per approved mining plan. Proper blasting design with optimum spacing & burden, Charge per delay and stemming. SOP for Charging, Stemming & Blasting/Firing of Blast Holes will be followed by blasting crew during initial stage of operation. Shots are fired during day time only. Charging and firing shall be carried out in the same day. Siren will be done for each blasting. Blasting evacuation plan prepared and executed. The danger zone will be distinctly demarcated (by means of red flags).
5	Transportation	Potential hazards and unsafe workings contributing to accident and injuries. Overloading of material. While reversal & overtaking of vehicle. Operator of truck leaving his cabin when it is loaded.	Before commencing work, drivers personally check the dumper/truck/tipper for oil(s), fuel and water levels, tyre inflation, general cleanliness and inspect the brakes, steering system, warning devices including automatically operated audio-visual reversing alarm, rear view mirrors, side indicator lights etc., are in good condition. Unauthorized person will not be allowed to operate or ride on the vehicle. Loading according to the vehicle capacity.

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

			Periodical maintenance of vehicles as per operator manual.
6	Natural calamities	Unexpected happenings	An emergency management plan will be prepared considering all possible natural calamity and the same will be executed if any such situation occurs. Escape Routes will be provided to prevent inundation of storm water. Fire Extinguishers & Sand Buckets in the designated areas.
7	Failure of Mine Benches and Pit Slope	Slope geometry, Geological structure	Ultimate or over all pit slope shall be below 60° and each bench height shall be 5m height.

7.3 DISASTER MANAGEMENT PLAN

This being a small rough stone & Gravel Quarry project that too working in a safe area, no major disaster is expected after following all the statutory rules and regulations.

7.3.1 MODEL DISASTER MANAGEMENT PLAN

The lessee has formulated the disaster Management plan keeping all eventualities in mind.

The mining operation will be carried out under the direction of qualified mines manager and supervisors, based on the guidelines and directions of Directorate General of Mines Safety (DGMS) and Indian Bureau of Mines. Code of practice of different operations will be formulated to ensure safety of men and machines and to avoid various hazards mentioned above. Mine workers will be provided training on safe work practices. The following natural/ industrial hazards may occur during normal operation; slope failure at the mine faces; accident due to heavy equipment/ machinery.

In order to prevent or take care of hazard / disasters if any the following control measures have been adopted.

- All safety precautions and provisions of Metalliferous Mines Regulations (MMR), 1961 is strictly followed during all mining operations.
- Observance of all safety precautions for blasting and storage of explosives as per MMR 1961.
- Entry of unauthorized persons into mine & allied areas is completely prohibited.
- Fire-fighting and first-aid provisions in the mines office complex and mining area are provided.

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

- Provisions of all the safety appliances such as safety boot, helmets, goggles, dust masks, ear plugs and ear muffs etc. are made available to the employees and the use of same is strictly adhered to through regular monitoring.
- Training and refresher courses for all the employees working in hazardous premises. Working of mine, as per approved plans and regularly updating the mine plans.
- Handling of explosives, charging and blasting are carried out only by qualified persons following SOP.
- Checking and regular maintenance of garland drains and earthen bunds to avoid any inflow of surface water in the mine pit.
- Provision of high-capacity standby pumps with generator sets with enough quantity of diesel for emergency pumping especially during monsoon.
- A blasting SIREN is used at the time of blasting for audio signal.
- Before blasting and after blasting, red and green flags are displayed as visual signals. Warning notice boards indicating the time of blasting and NOT TO TRESPASS are displayed at prominent places.
- Regular maintenance and testing of all mining equipment were carried out as per manufacturer's guidelines.

7.3.2 OBJECTIVE OF DISASTER MANAGEMENT PLAN

The objective of disaster management plan is to identify mitigation measures to avoid hazards turning in to risk, the materials required for implementing the same, the personnel requirement and their roles and responsibilities, and the communication and operating procedures to be adopted in case of an emergency.

Communication System

The telephone numbers and addresses of mine sites in the vicinity, nearest fire station, police station, local hospital, electricity department, ambulance, and local public representatives and revenue officials shall be prepared and kept in custody of PP.

Facilities

The office shed will have provision of first aid centre to provide first aid in the event of an emergency. The office shed will also function as emergency control room. It will be provided with telephone and mobile phones, and a vehicle for emergency transport.

Personnel

The PP is responsible for overall supervision of the disaster management plan. He will be assisted by supervisors, in implementing the emergency management plan and procedures.

Operating Procedures

The operating procedures during emergencies are related communication to the immediate supervisor, who would relay the same to PP. The PP may assess the requirement of first aid, external assistance, transportation to nearby hospital contingent on the emergency. In the absence of mines manager, the senior most supervisor will be made responsible for disaster management.

7.4 CUMULATIVE IMPACT STUDY

There are no existing Quarry and this proposed quarry are located within a radius of 500 m from this proposed project area. The existing and proposed quarries situated within 500 m radius are presented in below Table 7.2 and the letter received from

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

Dept. of Geology and Mining, Virudhunagar stating the quarries detail within 500m radius is enclosed in Annexure – 3.

Table 7.2 Details of Quarries within 500m radius

S.No	Name of the Quarry Owner	S.F. Nos & Village	Lease Status	Area in Ha
a. Existing Quarries:				
1.	S.Murugesan, No. 106/134, Madurai, Rajakadai Street, Rajapalayam	S.F.Nos. 635/4(P), 636 Gopalapuram Village	KV1/170/2019 Dt. 01.08.2020 26/08/2020 To 25/08/2025	2.89.0
2.	S.Murugesan, No. 106/134, Madurai, Rajakadai Street, Rajapalayam	S.F.No. 632(P) Gopalapuram Village	KV1/708/2021 Dt. 05.05.2025 05/05/2025 To 04/05/2030	1.25.0
3.	Thiru.P.Arumugam, M/s.Selvakumar Blue Metals	S.F.Nos. 567/2A, 567/2B, 568/1B Gopalapuram Village	KV1/159/2021 Dt. 01.02.2023 01/02/2023 To 31/01/2028	2.48.5
4.	Thiru.V.Rajmohan, M/s. Lakshmi Blue Metals, 540B, Gopalapuram Main Road, Nallamanaykenpatti (P)	S.F.Nos. 557/1, 558/1, 558/2, 559, 574, 557/2 Gopalapuram Village	KV1/232/2021 Dt. 31.01.2023 01/02/2023 To 31/01/2028	4.85.0
b. Abandoned Quarry				
1.	Government Quarry	S.F.No. 624 Gopalapuram Village	Prior to 2013	
c. Present Proposed Quarry				
1.	Thiru.S.Shanmugavel, S/o. Subbaiah 300, D5/2, Sangaran Kovil Road, Rajapalayam	S.F.Nos. 586/11, 586/12, 586/13 Gopalapuram Village	KV1/1029/2023	2.12.50

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

2.	Thiru.B.Kabildev, S/o. Baskaran, No.125/2, Teachers Colony, K.R Nagar (Post), Puthupalayam, Rajapalayam Taluk, Virudhunagar District.	S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F Gopalapuram Village	KV1/1216/2024	1.90.50
Total Area of Cluster		15.50.5 Ha		

As seen above, although the individual lease area of this project is less than 5 hectares, the no existing Quarry within a 500-meter radius, along with this subject project, add up to more than 5 hectares i.e. 15.50.5 Ha. A map showing the proposed quarry located within 500m radius is given in Figure 1.1.

The cumulative production load of existing and proposed Rough stone & Gravel quarries within cluster is shown in below table.

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

Table 7. 3 a Salient Features of Existing & Proposed Quarries

Description		P1	P2	P3
Name of the Quarry		Kabildev	S.Murugesan	S.Murugesan (2.89 Ha)
Geological Resources in m ³	Rough stone	7,61,600	4,06,736	535470
	Gravel	95,200	-	134760
	Top Soil	-	-	-
Mineable Reserves in m ³	Rough stone	2,44,440	1,27,525	276070
	Gravel	72,930	-	102222
	Top Soil	-	-	-
Five years plan period as in the approved mining plan	Rough stone	2,07,960	100925	276070
	Gravel	72,930	21280	102222
	Top Soil	-	5320	-
Production in m ³	Peak Production -rough stone	42,400	27750	62,100
	Gravel	19,380	10640	29,244
Total Production per day in tons		518	325	764
Lorry Loads per day in Nos	-	52	33	76
Employment in Nos		28	9	14
Proposed Depth in meters		45m BGL	35m BGL	26m BGL
Status of the quarry		Proposed	Existing	Existing

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

Table 7. 3 b Salient Features of Existing & Proposed Quarries

Description		P4	P5
Name of the Quarry		Thiru.P.Arumugam	Thiru.V.Rajmohan
Geological Resources in Ts	Rough stone	5,86,950	1456440
	Gravel	81144	194192
Mineable Reserves in Ts	Rough stone	235300	664265
	Gravel	52400	158417
Production plan period as in the approved mining plan	Rough stone	235300	664265
	Gravel	52400	158417
Production in Ts	Peak Production – rough stone	60550	307005
	Gravel	27480	105992
Total Production per day in tons		738	981
Lorry Loads per day in Nos	-	74	98
Employment in Nos		18.0	18.0
Proposed Depth in meters		29.5m BGL	29m BGL
Status of the quarry		Existing	Existing

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

Emission Calculation:

Various point and non-point sources of emissions from Proposed Rough Stone Quarry of Thiru.Kapildev is quantified and presented below:

Area Emissions – Total Material handling (Rough Stone)

Quantity, TPA	Rough Stone: 2,44,440 m ³ Gravel 72,930 m ³ (Five Years)
Operational Hours Per Year	2400
Activity Rate, t/hr.	400.152
Emission of dust, g/t.	0.19
Emission of dust, g /hr.	51.52
Area of influence, m ²	624
Uncontrolled emission rate g/s/m ²	0.00046234
Controlled emission rate, PM10 g/s/m ²	0.0004623
Controlled emission rate, PM2.5 g/s/m ²	0.00030822

Line Source – Transport of Rough Stone from Pit to Boundary

Quantity, TPA	Rough Stone: 2,44,440 m ³ Gravel 72,930 m ³ (Five Years)
Operational Hours Per Year	2400
Capacity of each Dumper (T)	10
Total No. of Tippers/ year	18980
Lead length/trip, Km	0.9
Total VKT/Year	75416
Emission Kg/VKT	0.20
Total emission Kg/Year	28143
Uncontrolled emission rate g/s/m	7.7404
Controlled emission rate, PM10 g/s/m	0.77404
Controlled emission rate, PM2.5 g/s/m	0.51230

Area Emissions – Total Material handling (Cluster Rough Stone)

Quantity, m ³	Proposed Quarries: Rough stone & Gravel Thiru.Kapildev 2,44,440 m³ of rough stone & Gravel 72,930 m³

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

	- Thiru. S.Murugesan 1,27,525 m³ - S.Murugesan (2.89 Ha) 2,76,070 m³ rough stone & Gravel 102222 m³ - Thiru.P.Arumugam 2,35,300 m³ rough stone & Gravel 52,400 m³ - Thiru.V.Rajmohan, 6,64,265 m³ rough stone & Gravel 1,58,417 m³
Operational Hours Per Year	2400
Activity Rate, t/hr.	365.52
Emission of dust, g/t.	0.27
Emission of dust, g /hr.	73.152
Area of influence, m ²	622
Uncontrolled emission rate g/s/m ²	0.00074253
Controlled emission rate, PM10 g/s/m ²	0.0007425
Controlled emission rate, PM2.5 g/s/m ²	0.0006142

Line Source – Transport of Rough Stone (Cluster)

Quantity, m ³	Proposed Quarries: Rough stone & Gravel - Thiru.Kapildev 2,44,440 m³ of rough stone & Gravel 72,930 m³ - Thiru. S.Murugesan 1,27,525 m³ - S.Murugesan (2.89 Ha) 2,76,070 m³ rough stone & Gravel 102222 m³ - Thiru.P.Arumugam 2,35,300 m³ rough stone & Gravel 52,400 m³ - Thiru.V.Rajmohan, 6,64,265 m³ rough stone & Gravel 1,58,417 m³
Operational Hours Per Year	2400
Capacity of each Dumper (T)	10
Total No. of Tippers/ year	121545
Lead length/trip, Km	0.18
Total VKT/Year	685274
Emission Kg/VKT	0.20
Total emission Kg/Year	18242
Uncontrolled emission rate g/s/m	6.1252
Controlled emission rate, PM10 g/s/m	0.61252
Controlled emission rate, PM2.5 g/s/m	0.54235

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

Note: *Emission factor computed based on wind speed of 2 m/s, and moisture content of 10 %. + Emission factor computed based on silt content of 10 % and moisture content of 10 %.

7.4.1 PREDICTED EMISSION ESTIMATION FROM CLUSTER

Predicted maximum ground level concentrations considering micro meteorological data of March to May 2025 are superimposed on the maximum baseline concentrations obtained during the study period to estimate the post project scenario, which would prevail at the post operational phase. The overall scenario with predicted concentrations over the maximum baseline concentrations is shown in the following table along with isopleths Figures 7.2 & 7.3. Various predicted emission levels in the villages surrounding site are presented in Table 7.4 and 7.7 below.

Table 7.4 Concentrations of PM2.5 after Project Implementation					
SL.No	Location	Background Concentration	Predicted incremental Concentration	Post Project Concentration	Statutory Limits in $\mu\text{g}/\text{m}^3$
1	Project Location	37.0	1.57	38.57	60
2	Sivalingapuram	29.4	1.39	30.79	
3	Ananthappanaickerpatti	31.9	1.22	33.12	
4	Tenkarai	30.2	1.05	31.25	
5	Varagunaramapuram	27.4	<1.0	28.4	
6	A. Lakshmipuram	24.3	<1.0	25.3	
Table 7.5 Cluster Concentrations of PM2.5 after Project Implementation					
SL.No	Location	Background Concentration	Predicted incremental Concentration	Post Project Concentration	Statutory Limits in $\mu\text{g}/\text{m}^3$
1	Project Location	37.0	2.18	39.18	60
2	Sivalingapuram	29.4	1.94	31.34	
3	Ananthappanaickerpatti	31.9	1.70	33.60	
4	Tenkarai	30.2	1.45	31.65	

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

5	Varagunaramapuram	27.4	1.21	28.61	
6	A. Lakshmipuram	24.3	< 1.0	25.30	

Table 7.6 Concentrations of PM10 after Project Implementation

SL.No	Location	Background Concentration	Predicted incremental Concentration	Post Project Concentration	Statutory Limits in $\mu\text{g}/\text{m}^3$
1	Project Location	76.0	3.76	79.76	100
2	Sivalingapuram	60.6	3.34	63.94	
3	Ananthappanaickerpatti	67.7	2.93	70.63	
4	Tenkarai	61.9	2.51	64.41	
5	Varagunaramapuram	55.1	2.09	57.19	
6	A. Lakshmipuram	51.6	1.67	53.27	

Table 7.7 Cluster Concentrations of PM10 after Project Implementation

SL.No	Location	Background Concentration	Predicted incremental Concentration	Post Project Concentration	Statutory Limits in $\mu\text{g}/\text{m}^3$
1	Project Location	76.0	6.04	82.04	100
2	Sivalingapuram	60.6	5.37	65.97	
3	Ananthappanaickerpatti	67.7	4.69	72.39	
4	Tenkarai	61.9	4.02	65.92	
5	Varagunaramapuram	55.1	3.35	58.45	
6	A. Lakshmipuram	51.6	2.68	54.28	

The above report seems that, even in the worst-case scenario, the resultant added concentrations with baseline figures show that the values of ambient air quality for PM₁₀ are in the range of 53.27 $\mu\text{g}/\text{m}^3$ to 79.76 $\mu\text{g}/\text{m}^3$ and for PM_{2.5} are in the range of 25.3 $\mu\text{g}/\text{m}^3$ to 38.57 $\mu\text{g}/\text{m}^3$ and PM₁₀ are surrounding area range of 54.28 $\mu\text{g}/\text{m}^3$

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

to $82.04 \mu\text{g}/\text{m}^3$ and for $\text{PM}_{2.5}$ are in the range of $25.30 \mu\text{g}/\text{m}^3$ to $39.18 \mu\text{g}/\text{m}^3$ which are within the statutory limits in each case.

FIG 7.1 Isopleth of GLC Prediction for $\text{PM}_{2.5}$

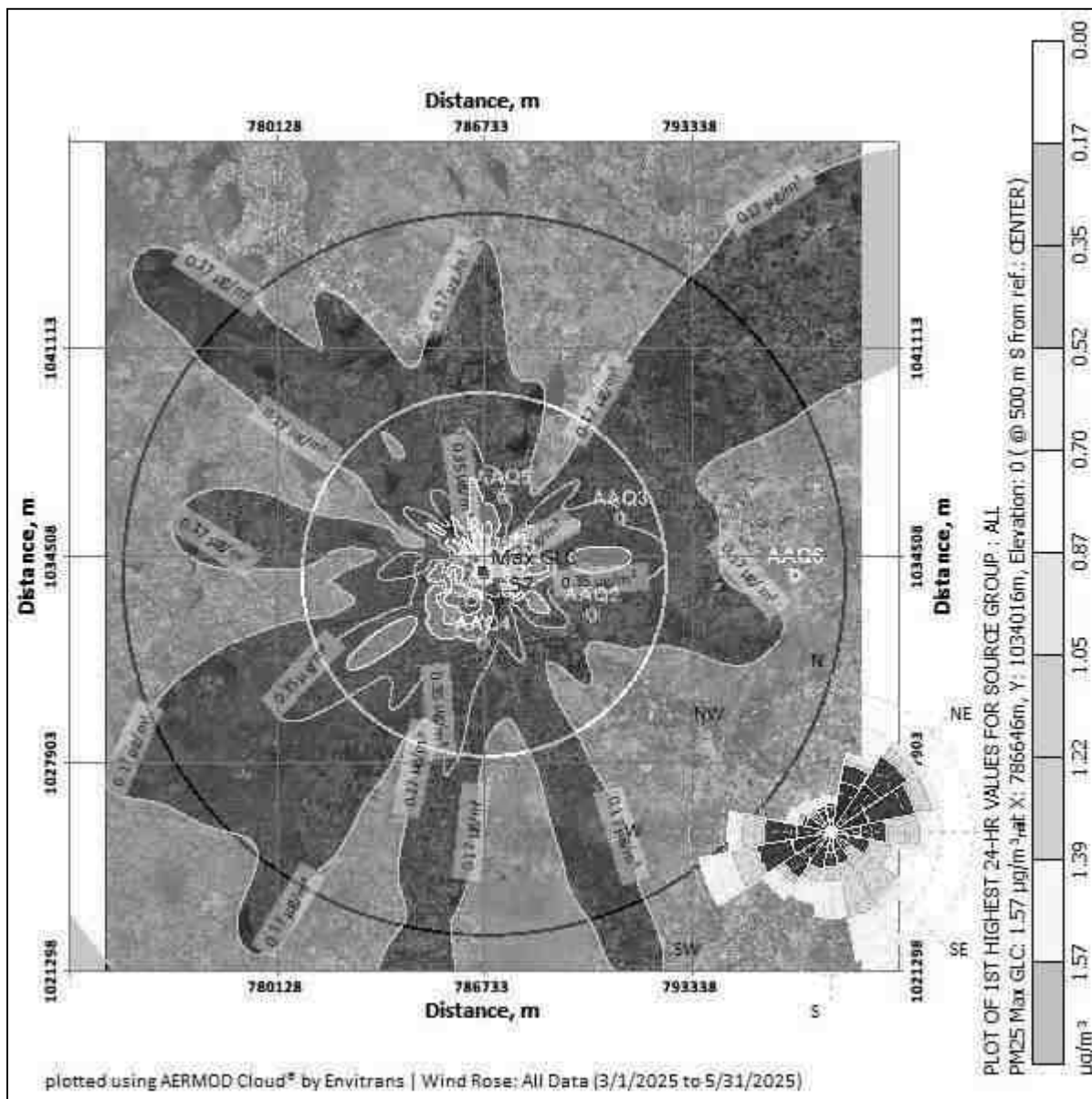
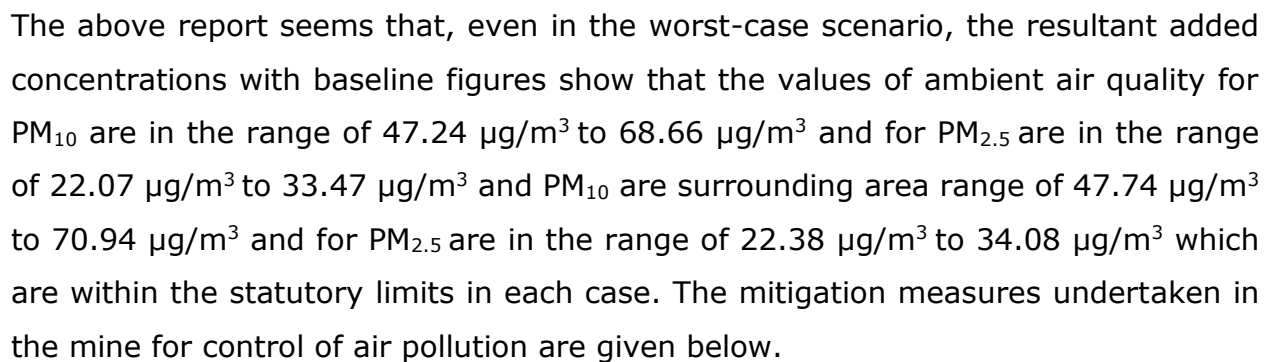


FIG 7.3 Isopleth of GLC Prediction –Cumulative for PM2.5



FIG 7.4 Isopleth of GLC Prediction –Cumulative for PM10



DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

- Wet drilling will be practiced in drilling operation.
- Water sprinkling will be done in haul roads & loading etc.
- The mines workers are provided with the dust masks.
- Three-layer plantation in the safety zone.

DG sets shall be periodically maintained as per manufacturer's specifications.

7.4.2 CUMULATIVE IMPACT ON SOCIO-ECONOMIC ENVIRONMENT

The mining operations in the 6 mines will provide direct employment opportunity and indirect employment opportunity for scores of people through allied opportunities in logistics, contract workers, trading, repairing works etc. Various mitigative measures suggested in this report will be properly implemented to ensure that no adverse impact is felt on the socio economic and ecological front in the area.

7.5 CLUSTER MINE CLOSURE PLAN

In the mine closure stage all necessary measures will be taken as per Act & Rules, there is no proposal for back filling, reclamation and rehabilitation in any of the proposals. The quarried pits after the end of life of mine will be properly fenced all around to prevent inherent entry of public and cattle and all the statutory requirements will be fulfilled. As already explained, in the post mining stage the rainwater harvested in the mined- out void shall be utilized for irrigation and domestic needs locally. The mine closure plan is provided in Figure 2.8.

7.6 SLOPE STABILITY PLAN

The factors that affect slope stability of the mine are detailed below.

- Geological structure comprising dip, intervening shear zone formation, clay intrusion, joints / discontinuities, faults etc.,
- Lithology of formation

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

- slope geometry
- Ground water availability which may cause increased thrust on the faces

Site Specific Analysis

- The quarry lease area is plain terrain. The rock type noticed in the lease area is Charnockite which contains mostly Quartz and Feldspar with some ferromagnesian.
- Since the formation is of homogeneous rock type probability of slope failure is low and can be avoided if proper measures are adopted.
- There will be a 7.5m safety zone which will form a ridge which can also take care of the top section and as such no risk is envisaged on this front.

Mitigation Measures

- Regular inspection of the mine faces to be carried out by pp for ensuring absence of any structural features like faults, joints, dyke, intrusive material in the rock strata which may affect the slope stability and cleared.
- No loose material or boulders is to be stacked on the mine top or pit benches.
- Height of the benches should be 5m.
- Haul road formation will be at 1 in 15 slope with adequate road width.
- There will be no ground water table intersection.
- No seepage is expected due to formation. Adequate drainage management system comprising peripheral garland drain, settling pond to regulate monsoon water will be created to prevent saturation of compact layers, apparent drainage over the bench slope to avert damages to quarry face and manage the water flow.

8 PROJECT BENEFITS

The project area is located on Patta land, thereby causing no impact on the loss of agriculture or forest land. The project will create employment opportunities in the area. There will be no adverse effect of mining on the socioeconomic status of the people; rather, mining activities will improve their standard of living. The mining activity creates employment opportunities for the local people, and this definitely raises their economic status. Apart from the overall beneficial impact of the project on the local people of the region, it is felt necessary to augment facilities in the fields of education, health, and social awareness, including concern for the environment and ecosystem.

The mining activity at proposed Rough Stone & Gravel Quarry of Thiru. B. Kabildev S/o. Baskaran will create direct employment opportunity for 28 local people (16 Nos. Direct and 12 Nos. Indirect). The PP has proposed CER amount of Rs. 5.0 Lakhs for surrounding schools' development.

9 ENVIRONMENTAL COST BENEFIT ANALYSIS

Environmental Cost Benefit Analysis is recommended during the scoping stage, if needed. In the TOR granted by SEIAA, Tamil Nadu vide TOR identification No. TO25B0108TN5689908N/2025 Dated: 25.07.2025. Hence not applicable.

10 ENVIRONMENTAL MANAGEMENT PLAN

The Environmental Management plan is a site-specific plan. It is developed to ensure that the project is implemented in an environmentally sustainable manner, where all contractors and subcontractors, including consultants if any, understand the potential environmental risks arising from the project and take appropriate actions to minimize those risks. EMP also ensures that the project implementation is carried out in accordance with the planned design and by taking appropriate mitigation measures to reduce adverse environmental impacts during project's life cycle.

10.1 ENVIRONMENTAL POLICY

The Project Proponent – Thiru. B. Kabildev S/o. Baskaran will carry out all the quarrying operations and activities in an environmentally responsible manner and to continually improve environmental performance.

The Proponent will:

- Abide by all laws, ordinances, rules, and regulations that are pertinent to its operations and activities.
- Allocate the resources required to guarantee that the environmental policy is carried out.
- Implement a programme to educate employees about environmental issues in general and their personal environmental responsibilities at work.
- Set up monitoring systems to alert as soon as there is a problem or a performance that is unexpected in relation to environmental protections.

10.2 ENVIRONMENTAL MANAGEMENT PLAN

The impacts due to this mining project are detailed in chapter 4. Mitigation measures at the source level and an overall Management Plan at the site level are elaborated

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

in this chapter. Details of EMP measures for implementation in the mine are given in the Table 10.1.

Table 10.1 - ENVIRONMENTAL MANAGEMENT PLAN

Environmental Parameter	Mitigation Measures
Air	Wet drilling to suppress the dust emission from drill machine
	Regular water sprinkling on haulage road through fixed water sprinkler.
	1.5 m ³ /day of water will be used for dust suppression.
	Avoiding blasting during high wind period, night times and temperature inversion periods.
	Regular grading of haul road to clear accumulation of loose material.
	It will be ensured that vehicles are properly maintained to comply with exhaust emission requirements
	Maintenance as per operator manual of the equipment and machinery in the mines to minimizing air pollution
	Ambient Air Quality Monitoring carried out in the project area and in surrounding villages to access the impact due to the mining activities and the efficacy of the adopted air pollution control measures.
	Afforestation for control of dust.
Water	
Surface water	No major river is found nearby the lease-applied area. Odai – Adjacent to Eastern Side (10m Safety Maintained), Tank – 420m (S), Solasseri River – 1.3 km (SW), Cholapuram River – 2.1 km (W), Odai – 2.5 km (NE). There is no effluent discharge from this proposed Quarry. So, no impact is anticipated. Surface runoff management structures like garland drain of required length which is connected to a settling pond will be constructed around the quarry to collect the rain water. Monthly or after rainfall, inspection for performance of water management structures and systems.

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

	There is no discharge of any effluent into nearby water bodies.
Ground Water	The quarrying operation is proposed upto a depth of 45 m maximum below ground level, the water table in the area is 53m & 56m below ground level, hence the project will not intersect the Ground water table during entire quarry period.
Water Consumption and Wastewater generation	The required water of 3.9 KLD will be procured from outside agencies initially and later rainwater harvested in the mine pit shall be used other than drinking purpose.
	Domestic wastewater generation of 1.2 KLD will be discharged in soak pit via septic tank.
	Conduct ground water and surface water monitoring for parameters specified by CPCB
Noise	The workers employed are provided with personal protective equipment (PPE) as such, earmuffs and ear- plugs for the protection from high noise level generated at the mine site wherever required.
	Noise levels are controlled by using optimum explosive charge, proper delay detonators and proper stemming to prevent blow out of holes.
	Development of thick greenbelt all along the Buffer Zone (7.5 Meters) of the project area to attenuate the noise and the same will be maintained.
	Preventive maintenance of mining machinery and replacement of worn-out accessories to control noise generation.
	Regular ambient noise level monitoring will be carried out in the project area and in surrounding villages to assess the impact due to the mining activities and the efficacy of the adopted noise control measures.
Ground Vibration and Fly Rock Control	Controlled blasting using delay detonators will be carried out to maintain the PPV value well within the prescribed standards of DGMS.
	Drilling and blasting will be carried under the supervision of qualified persons.

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

	ensure blast holes are adequately stemmed for the depth of the hole and stemmed with suitable angular material.
	Undertake noise or vibration monitoring.
Land Environment	There is no change will be in the land use pattern as mentioned in the approved mining plan a such mine pit, safety zone etc., At conceptual stage, the mining pits will be converted into Rain Water Harvesting. Remaining area will be converted into greenbelt area.
	Garland drains with catch pits / settlement traps to be provided all around the project area to prevent run off affecting the surrounding lands.
	The periphery of Project area will be planted with thick plantation to arrest the fugitive dust, which will also act as acoustic barrier.
	Frequent Soil and ground water testing as per Environmental Monitoring Plan.
Top Soil / Overburden	There is no waste anticipated in this rough stone & Gravel Quarry. The entire quarried minerals will be utilized.
Biological Environment	During mining, three-layer thick plantation will be carried out around the project periphery, on safety barrier zone, on top benches of quarried out area etc.,
	The main attributes that retard the survival of sapling is fugitive dust, this fugitive dust can be controlled by water sprinkling on the haul roads and installing a sprinkler unit near the newly planted area.
	Regular review on Greenbelt development programme.
	Year wise greenbelt development plan mentioned in Chapter IV

10.3 ADMINISTRATION AND TECHNICAL SETUP

The Environment Monitoring Cell discussed under Chapter 6 will ensure effective implementation of environment management plan and to ensure compliance of environmental statutory guidelines through Mine Management Level. The organizational chart for the same has been given below.

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

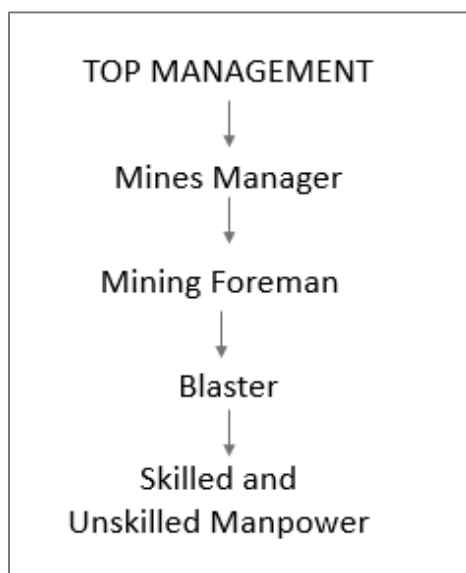


Figure 10.1 Organization Chart

The action plan for monitoring consists of monitoring of following environmental components.

- Monitoring of the water/ waste water quality, air quality and solid waste generated
- Analysis of the water and air samples collected through external laboratory
- Implementation and monitoring of the pollution control and protective measures/ devices which shall include financial estimation, ordering, installation of air pollution control equipment, waste water treatment plant, etc.
- Co-ordination of the environment related activities within the project as well as with outside agencies
- Green belt development

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

- Monitoring the progress of implementation of the environmental monitoring programme
- Compliance to statutory provisions, norms of State Pollution Control Board, Ministry of Environment and Forests and the conditions of the environmental clearance as well as the consents to establish and consents to operate.

10.4 OCCUPATIONAL SAFETY & HEALTH MANAGEMENT

Occupational safety and health are very closely related to productivity and good employer-employee relationship. The main factors of occupational health impact in quarries are fugitive dust and noise. Safety of employees during quarrying operation and maintenance of mining equipment will be taken care as per Mines Act 1952 and Rule 29 of Mines Rules 1955. To avoid any adverse effect on the health of workers due to dust, noise and vibration sufficient measures have been provided. The health status of workers in the mine shall be regularly monitored under an occupational surveillance program. Under this program, all the employees are subjected to a detail medical examination at the time of employment.

10.5 BUDGETARY PROVISION FOR ENVIRONMENTAL MANAGEMENT

Adequate budgetary provision has been made by the Company for execution of Environmental Management Plan. The below Table gives overall investment on the environmental safeguards and recurring expenditure for successful monitoring and implementation of control measures.

Table 10.2 Environmental Management Plan Budget

Activities	Mitigation Measure	Capital cost	Recurring Cost per Annum
Air Environment	Compaction, gradation and drainage on both sides for Haulage Road	0.10	0.10

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

	Fixed Water Sprinkling Arrangements + Water sprinkling by own water tankers	5.00	0.25
	Muffle blasting – To control fly rocks during blasting	0.00	0.05
	Wet drilling procedure / latest eco-friendly drill machine with separate dust extractor unit	0.30	0.06
	No overloading of trucks/tippers/tractors	0.00	0.05
	Stone carrying trucks will be covered by tarpaulin	0.00	0.10
	Enforcing speed limits of 20 km/hr within ML area	0.08	0.01
	Regular monitoring of exhaust fumes as per RTO norms	0.00	0.05
	Regular sweeping and maintenance of approach roads for at least about 200 m from ML Area	0.00	0.38
	Installing wheel wash system near gate of quarry	2.00	0.05
Sub-Total (A)		7.48	1.10
Noise Environment	vision for Portable blaster shed	0.30	0.02
Sub-Total (B)		0.30	0.02
Waste Management	vision for domestic waste collection and disposal through authorized agency	0.20	0.10
	Installation of dust bins	0.05	0.02

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

Sub-Total (C)		0.25	0.12
Mine Closure	Plantation inside ML area (430 Nos.)	0.43	0.09
Sub-Total (D)		0.43	0.09
Implementation of EC, Mining Plan & DGMS Condition	Size 6' X 5' with blue background and white letters as mentioned in MoM Appendix II by the SEAC TN	0.05	0.01
	Air, Water, Noise and Soil Quality Sampling every 6 Months for Compliance Report of EC Conditions	0.00	0.50
	Workers will be provided with Personal Protective Equipment's	0.28	0.03
	Health checkup for workers will be provisioned	0.00	0.14
	First Aid facility Provision	0.00	0.02
	Signage & boards for safety precautions	0.05	0.01
	No parking will be provided on the transport routes. Flaggers will be deployed for traffic management	0.19	0.01
	Installation of CCTV cameras in the mines and mine entrance	0.15	0.02
Sub-Total (E)		0.72	0.74
Grant Total (A+B+C+D+E)		9.18	2.07
Total EMP Cost for 10 years is 35.22 lakhs i.e., 9.18 Lakhs of Capital Cost + 26.04 Lakhs of Recurring Cost (For 10 Years)			

10.6 CONCLUSION

Various aspects of mining activities were considered and related impacts were evaluated. Considering all the possible ways to mitigate the environmental concerns, Environmental Management Plan was prepared and fund has been allocated for the same. The EMP is dynamic, flexible and subjected to periodic review. For project where the major environmental impacts are associated, EMP will be under regular review. Senior Management responsible for the project will conduct a review of EMP and its implementation to ensure that the EMP remains effective and appropriate. Thus, the proper steps will be taken to accomplish all the goals mentioned in the EMP and the project will bring the positive impact in the study area.

11. SUMMARY AND CONCLUSION

11.1 INTRODUCTION

This EIA Report is prepared for Thiru. B. Kabildev S/o. Baskaran Rough Stone & Gravel Quarry over an extent of 1.90.50 Ha. Patta land in S. F. No. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu in compliance with ToR obtained vide TOR Identification No. TO25B0108TN5689908N/2025 Dated: 25.07.2025.

Although the individual lease area of this project is less than 5 hectares, four existing Quarries and two proposed quarries (including this proposal) within a 500-meter radius, add up to more than 5 hectares i.e. 15.50.50 Ha. A map showing the existing and proposed quarry located within 500m radius is given in Figure 1.1.

S.No	Name of the Quarry Owner	S.F. Nos & Village	Lease Status	Area in Ha
a. Existing Quarries:				
1.	S.Murugesan, No. 106/134, Madurai, Rajakadai Street, Rajapalayam	S.F.Nos. 635/4(P), 636 Gopalapuram Village	KV1/170/2019 Dt. 01.08.2020 26/08/2020 To 25/08/2025	2.89.0
2.	S.Murugesan, No. 106/134, Madurai, Rajakadai Street, Rajapalayam	S.F.No. 632(P) Gopalapuram Village	KV1/708/2021 Dt. 05.05.2025 05/05/2025 To 04/05/2030	1.25.0
3.	Thiru.P.Arumugam, M/s.Selvakumar Blue Metals	S.F.Nos. 567/2A, 567/2B, 568/1B Gopalapuram Village	KV1/159/2021 Dt. 01.02.2023 01/02/2023 To 31/01/2028	2.48.5
4.	Thiru.V.Rajmohan, M/s. Lakshmi Blue Metals, 540B, Gopalapuram Main Road,	S.F.Nos. 557/1, 558/1, 558/2, 559, 574, 557/2 Gopalapuram	KV1/232/2021 Dt. 31.01.2023 01/02/2023 To 31/01/2028	4.85.0

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

	Nallamanaykenpatti (P)	Village		
b. Abandoned Quarry				
1.	Government Quarry	S.F.No. 624 Gopalapuram Village	Prior to 2013	
c. Present Proposed Quarry				
1.	Thiru.S.Shanmugavel, S/o. Subbaiah 300, D5/2, Sangaran Kovil Road, Rajapalayam	S.F.Nos. 586/11, 586/12, 586/13 Gopalapuram Village	KV1/1029/2023	2.12.50
2.	Thiru.B.Kabildev, S/o. Baskaran, No.125/2, Teachers Colony, K.R Nagar (Post), Puthupalayam, Rajapalayam Taluk, Virudhunagar District.	S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F Gopalapuram Village	KV1/1216/2024	1.90.50
Total Area of Cluster		15.50.5 Ha		

11.2 PROJECT DESCRIPTION

Table 11.1 Salient Features of the Project

Description	Salient Feature
Name of the Project	Thiru. B. Kabildev S/o. Baskaran
Location of the Project	S. F. No. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District
Latitude & Longitude	Latitude: 09°21'12.93"N to 09°21'17.96"N Longitude: 77°36'36.59"E to 77°36'42.09"E.
Toposheet No.	58-G/11
ML Area	1.90.50Ha

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

Type of Land	Patta Land
Geological Resource	7,61,600 m ³ of Rough Stone and 95,200 m ³ of Gravel
Mineable Reserves	2,44,440 m ³ (32.09%) of Rough Stone and 72,930 m ³ (76.60%) of Gravel
Proposed Production for ten years	2,44,440 m ³ (32.09%) of Rough Stone and 72,930 m ³ (76.60%) of Gravel for 10 years
Life of the mine	10 years
Proposed depth of mining	45.0 m bgl
Method of Mining	Opencast mechanized mining involving drilling and blasting
Proposed bench height and width	Bench Height & Width – 5m.
Waste Generated & its management	There is no overburden anticipated during the entire Rough Stone & Gravel quarrying operation. The excavated rough stone & Gravel Quarry will be manually dressed into small building stones for foundation purpose.
Bench parameters	The proposed bench height & width is 5.0m respectively and the number of proposed benches is 7.
Water Requirement & source	Total – 3.9 KLD. The required water will be procured from outside agencies initially. Later, water collected in the mine pit will be used to meet the needs.
Proposed Manpower Deployment	28 Nos
Total Project Cost	Rs.136.15 Lakhs
EMP cost (in Lakhs).	Rs.35.22 Lakhs
CER cost (in Lakhs).	Rs.5.00 Lakhs
Nearest Highway	(SH-41) Tirunelveli – Rajapalayam Road : 5.4 km, (NH-744) Tenkasi – Tirumangalam Road : 11.7 km
Nearest Railway Station	The Nearest Railway line is Cholapuram which is about 4.36 Km on Western side of the area.

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

Nearest Airport	Madurai International Airport – 74.92 km NE
Nearest Major Water bodies	Odai – Adjacent to Eastern Side (10m Safety Maintained), Tank – 420m (S) Solasseri River – 1.3 km (SW) Cholapuram River – 2.1 km (W) Odai – 2.5 km (NE)
Environmental sensitive areas, Protected areas as per Wildlife Protection Act, 1972 (Tiger reserve, Elephant reserve, Biospheres, National parks, Wildlife sanctuaries, community reserves and conservation reserves)	Nil within a 10Km radius. Kothankulam R.F. – 10.2 km (NW)
NBWL Clearance / Conservation Measures	Nil within 10 km radius Srivilliputhur Megamalai Tiger Reserve – 17.3 km (NW)
Reserved / Protected Forests	Nil within a 10Km radius. Kothankulam R.F. – 10.2 km (NW)
Nearest Village	Gopalapuram: 1.4 km (NE), Kuruchiarpatti – 0.8 km (NW), Mettuvadakarai – 1.5 km (SE), Muthanathi – 1.4 km (W)
Seismic Zone	Zone II

11.3 DESCRIPTION OF THE ENVIRONMENT

The baseline monitoring study was carried out during March to May 2025 to assess the existing environmental scenario in the area. For the purpose of EIA studies, project area was considered as the core zone and area outside the project area up to 10km radius from the periphery of the project site was considered as buffer zone. Baseline Environmental data has been collected for: -

- a) Land
- b) Water

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

- c) Air
- d) Noise
- e) Biological
- f) Socio-economic status

11.3.1 LAND ENVIRONMENT

The existing land use pattern of the study area is tabulated below in table 11.2.

Table - 11.2 Land use Pattern of the study area

Sl.No.	LAND USE / LAND COVER	Area in Sq.Km	Area in Percentage
1	Built-up land	14.13	4.42
2	Crop land	156.29	48.89
3	Fallow land	20.04	6.26
4	Land with scrub	53.44	16.71
5	Land without scrub	36.74	11.49
6	Existing Quarry	3.72	1.16
7	Plantations	8.35	2.61
8	Water bodies	26.94	8.46
	Total Area	319.65	100.0

Source: Survey of India Toposheet and Landsat Satellite Imagery

11.3.2 SOIL CHARACTERISTICS

Results of the soil samples show that the pH values were found to be 6.89 to 7.73 and Electrical Conductivity values were ranging between 23.71 – 181.6 μ mhos/cm. Soils are generally Silt Loam. Organic matter values were ranging between 0.62 – 2.55 %. Total Nitrogen values were ranging between 98.8 – 751 mg/kg. Phosphorus values were ranging between 1.34 – 2.28 μ g/g. Potassium values were ranging between 592 – 820 mg/kg. Sodium values were ranging between 199 – 479 mg/kg. Total Sulphate values were observed to be BDL. The soil quality data for the 6 samples collected and analyzed are provided in Table no – 3.14.

11.3.3 AMBIENT AIR QUALITY

The results of ambient air quality monitoring for the period (March to May 2025) are presented in Chapter 3. The ambient air quality data for PM₁₀, PM_{2.5}, SO₂, NO₂, CO studied at 6 locations as per prescribed guidelines/ methods. As per the monitoring data, the PM₁₀ values were in the range of 40.8 – 76.0 µg/m³. PM_{2.5} values were in the range of 19.4 – 37.0 µg/m³. SO₂ levels were ranging from 3.7 – 8.4 µg/m³. NO₂ levels were ranging from 7.4 – 12.6 µg/m³. While comparing with the NAAQ Norms laid by MoEFCC, all monitored values of PM₁₀, PM_{2.5}, SO₂, NO₂ & CO were found to be well within the prescribed standards. The CO values in the all locations found to be below detectable limit (DL – 1144 µg/m³).

11.3.4 WATER ENVIRONMENT

Ground Water

Suitability of ground water for drinking/irrigation/industrial purposes is determined keeping in view the effects of various chemical constituents present in water as required human use, plant use. Though many ions are very essential for the growth of plants and human body but when present in excess, have an adverse effect on health and growth.

As Per the data it has been observed that the pH value varies from 7.27 to 7.69, Chlorides Ranges From 40.5 - 165 mg/l, Sulphates value found to be between 16.8 - 192 mg/l, Fluoride Ranges low in lease area i.e. BDL(D.L – 0.1), Hardness varies from 194 – 396 mg/l, and Total dissolved solid 298 – 592 mg/l. The ground water has been analyzed as per IS10500: 2012 and found to be suitable for drinking purpose. So the results of chemical and bacteriological analysis of water samples are classified under good class for drinking purpose with respect to total dissolved solids. Total hardness of the samples ranged from soft to moderately hard waters and can be fairly used for drinking. Regular ground water monitoring is suggested as the

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

quality of ground water may fluctuate with groundwater consumption and seasonal variations.

11.3.5 NOISE ENVIRONMENT

From the table it is observed that the day Equivalent Noise (Leq-d) level were ranging from 44.8 to 49.7 dB(A) and Night Equivalent Noise (Leq-n) level were ranging from 37.9 to 42.9 dB(A). Day and Night Equivalent Noise (Leq-n) level were ranging from 43.5 to 48.1 dB(A). While comparing with the MoEFCC Norm of 55 dB(A) for day time and 45 dB(A) for night time in Residential areas, the monitored ambient noise levels are within the limit values.

11.3.6 BIOLOGICAL ENVIRONMENT

There is no schedule I species of animals observed within study area as per Wildlife Protection Act 1972 as well as no species is in vulnerable, endangered or threatened category as per IUCN. There is no endangered red list species found in the study area. Hence this small operation over short period of time will not have any significant impact on the surrounding flora and fauna.

11.3.7 SOCIO-ECONOMIC ENVIRONMENT

An attempt has been made to assess the impact of the proposed mining project at Gopalapuram Village on Socioeconomic aspect of the study area. The various attributes that have been taken into account are population composition, employment generation, occupational shift, household income and consumption pattern. Implementation of the Proposed Mine Project will generate both direct and indirect employment. Besides, Mining operation will be legally valid and it will bring income to the state exchequer.

11.4 ANTICIPATED ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

The main scope of the EIA study is to quantify the cumulative impact in the study area due to cluster quarries and formulate the effective mitigation measures for each individual leases. A detailed account of the emission sources, emissions control equipment, background Air quality levels, Meteorological measurements, Dispersion model and all other aspects of pollution like effluent discharge, Dust generation etc., have been discussed in Chapter 4 of this report.

The project proponent will adopt all the necessary mitigation measures and management plan mentioned in this report and also comply the conditions stipulated in Environmental clearance and CTO of this project.

Anticipated Impacts & Mitigation Measures

Impact	Mitigation Measures
Land Environment	
• Destruction of natural landscapes • Changes in soil characteristics • Soil erosion and slope instability • Problems to agricultural land and human habitations due to dust, and noise caused by movement of heavy vehicles. •	• Rough stone & Gravel Quarry does not produce any toxic effluents in the form of solids, liquids, or gases. • At the end of life of mine, the excavated mine pit / void of 1.46.00 Ha. will act as artificial reservoir for collecting rain water and helps to meet out the demand or crises during drought season. • After mine closure the greenbelt (0.42.5 Ha.) will be developed along the safety barrier and top benches and 0.02 ha are approach road and Infrastructure. • The periphery of the mining lease area will be converted to a

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

	greenbelt to prevent Noise and sound propagation to the nearby lands. - Entire mined out area will be properly fenced to prevent inadvertent entry of human and animals. - Construction of garland drains all around the quarry pit and construction of settling traps at strategic location in lower elevations to prevent soil erosion due to surface runoff during rainfall and also to collect the storm water for various uses within the proposed area.
Water Environment	
- Impact due to Usage of Water in mines - Generation of waste water from vehicle washing - Domestic sewage - Washouts from surface exposure or working areas - Impact on Surface Water Resources - Impact on Ground water - Impact on Water Quality	- Odai – Adjacent to Eastern Side (10m Safety Maintained), Tank – 420m (S) Solasseri River – 1.3 km (SW)Cholapuram River – 2.1 km (W) Odai – 2.5 km (NE) - There is no proposal for a rough stone & Gravel Quarry processing or workshop within the project area, so no effluent is anticipated in the mine. - The required water (3.9 KLD) will be sourced initially from outside agencies. Later the rainwater collected in the mine pit sump will be used for this purpose. - Regular water quality will be carried in nearby villages to ensure the water quality is not

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

	affected due to the quarrying activities. - Domestic sewage from site office & urinals/latrines provided in project area will be discharged through septic tank followed by soak pit system. - Only clear and settled water free from silt content will be used for dust suppression and greenbelt development. - De-silting will be carried out before and immediately after the monsoon season and the settling tank and drains will be cleaned weekly, especially during monsoons. - Two sump with each capacity 2500 Cu.m proposed to harvest rain water. The rain water stored in the pond will be utilized for plantation, dust suppression activities.
Air Environment	
- Generation of Fugitive Dust - Dust will be generated mainly during excavation, loading & unloading activities. - Reduction in visibility due to dust plumes. - Coating of vegetation leading to reduced photosynthesis. - Inhibited growth, destroying of foliage, degradation of crops;	Using Wet drilling methods, Allowing drilling only with PPE, Carrying out blasting only during specified times, Avoiding blasting during unfavourable weather conditions, Using explosives of good quality, Using mist sprayers Regular wetting of transport, Covering the materials carried in tippers with tarpaulin, Proper maintenance of vehicles used for transportation, Conducting regular emission tests for vehicles used for transport.

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

• Increase in health hazards due to inhalation of dust.	• Speed restrictions will be imposed to avoid spillage of loaded materials upon the road and to reduce wear and tear of the road. • Weekly inspections of the condition of the access road by competent person employed, and immediate action will be taken to address any potholes or damage to the road surface. • Development of greenbelt is proposed in the safety zone of 10m and 7.5m barriers in the lease area. • Personal Protective Equipment's will be provided to all workers
Noise & Vibration	
• The main noise generating source during mining operation and related activities are drilling, excavation, loading, unloading and transportation.	• Usage of sharp drill bits while drilling which will help in reducing noise; • Secondary blasting will be totally avoided and hydraulic rock breaker are utilized for breaking boulders; • Controlled blasting with proper spacing, burden, stemming and optimum charge/delay will reduce noise; • The blasting will be carried out during favourable atmospheric condition and less human activity timings by using nonelectrical initiation system;

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

	• Proper maintenance, oiling and greasing of machines will be done every week to reduce generation of noise; • Provision of sound insulated chambers for the workers working on machines (HEMM) producing higher levels of noise; • Green Belt will be developed around the project areas and along the haul roads. The plantation minimizes propagation of noise; • Personal Protective Equipment (PPE) like ear muffs/ear plugs will be provided to the operators of HEMM and persons working near HEMM and their use will be ensured through training and awareness. • Regular medical check-up and proper training to personnel to create awareness about adverse noise level effects.
Ground Vibration	
• The vibration due to blasting can cause damage to the nearby structures if appropriate technology and control measures are not adopted in the blasting operation. • Fly rock is another possible damage causing outcome of blasting.	• Proper quantity of explosive, suitable stemming materials and appropriate delay system should be adopted to avoid overcharging and for safe blasting; • Adequate safe distance from blasting should be maintained as per DGMS guidelines; • Blasting shelter should be provided as per DGMS guidelines;

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

	• Blasting operations shall be carried out only during day time; • The charge per delay shall be minimized and preferably more number of delays will be used per blasts; • During blasting, other activities in the immediate vicinity shall be temporarily stopped; • Drilling parameters like depth, diameter and spacing will be properly designed to give proper blast; • Blasting will be carried out under the supervision of statutory persons as approved by DGMS. • A well-defined SOP will be framed under the leadership of top management and the same will be followed for each blasting. • Regular PPV monitoring will be carried out to ensure PPV limits i.e., 0.5 mm/s.
Biological Environment	
• Direct impacts include land clearance and excavation causing destruction of flora and fauna and loss of habitats. • Indirect impacts include habitat degradation due to noise, dust, and human activity.	• Only some common herbs, shrubs and grass will be cleared. So, there will be no impact on the biodiversity. • Green belt development with suitable species will enhance the biodiversity of the project area.

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

	The core zone or buffer zone does not encompass any threatened flora or fauna species.
Socio-Economic Environment	
- Health and safety of workers and the general public. - Increase in traffic volumes and sizes of road vehicles. - Economic issues, including the increase in employment opportunities.	- Around 28 local workers will get employment opportunities along with periodical training to generate local skills. - Mine management will contribute for the upliftment of these villages by conducting regular medical camps, assistance in developing necessary infrastructure facilities like maintenance of schools, village roads, drinking water supply, etc.
Occupational Health & Safety	
- Exposure to Dust - Noise and Vibration Exposure - Physical Hazards - Respiratory hazards due to Dust exposure	- Provision of rest shelters for mine workers with amenities like drinking water etc. - All safety measures like use of safety appliances, such as dust masks, helmets, shoes, safety awareness programs, awards, posters, slogans related to safety etc. - Training of employees for use of safety appliances and first aid in vocational training centre. - Weekly maintenance and testing of all equipment as per manufacturers' guidelines.

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

	• Pre placement and Yearly Medical Examination of all workers by a medical Officer. • First Aid facility will be provided at the mine site. • Close surveillance of the factors in working environment and work practices which may affect environment and worker's health by the mine's manager employed. • Working of mine as per approved mining plan and environmental plans.

11.5 ANALYSIS OF ALTERNATIVES

There are no alternatives suggested as the proposed mining area has the following Advantages:

- The mineral deposit occurs in a non-forest area.
- There is no habitation within the applied lease area; hence, no R & R issues exist.
- There is no river, stream, nallas and water bodies in the or passing through the applied mine lease areas.
- Mine connectivity through road and rail is good.
- The proposed mining operations do not intersect the ground water level. Hence, no impact on ground water environment.

11.6 ENVIRONMENTAL MONITORING PROGRAM

Environmental Monitoring program will be conducted for various environmental components as per conditions stipulated in Environmental Clearance Letter issued by

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

SEIAA & Consent to Operate issued by TNPCB. Post project monitoring program is detailed in Chapter 6.

PP will supervise the overall environmental management plan of the project during operation. The capital cost of Rs. 9.18 Lakhs and the recurring cost of Rs. 26.04 Lakhs have been allocated under the EMP budget which includes Environmental Monitoring Cost.

11.7 ADDITIONAL STUDIES

Risk Analysis & Disaster Management Plan

The methodology for the risk assessment has been based on the specific risk assessment guidance issued by the Directorate General of Mine Safety (DGMS). The DGMS risk assessment process is intended to identify existing and probable hazards in the work environment and all operations and assess the risk levels of those hazards in order to prioritize those that need immediate attention.

Further, mechanisms responsible for these hazards are identified and their control measures set to time table are recorded along with pinpointed responsibilities. In the unlikely event that a consequence has occurred, disaster management kicks in. This includes instituting procedures pertaining to a number of issues such as communication, rescue, and rehabilitation. These are addressed in the disaster management plan. Both, the RA and DMP, are living documents and need to be updated whenever there are changes in operations, equipment, or procedures. Assessment is all about preventing accidents and taking necessary steps to prevent it from happening.

The Disaster Management Plan (DMP) is a guide, giving general considerations, directions, and procedures for handling emergencies likely to arise from planned operations. The DMP has been prepared on the basis of the Risk Assessment and related findings covered in the report.

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

Terms of Reference with Public Hearing (ToR) for the project was issued vide ToR TO25B0108TN5689908N/2025 Dated: 25.07.2025 (File No – 12333). Now, this Draft EIA / EMP Report is prepared for conducting Public Hearing as the projects falls under B1 Category.

Although the individual lease area of this project is less than 5 Ha, the one existing and this proposed quarries within the 500m radius along with this subject project works out to >5 Ha. A Cumulative impact study is conducted to determine the impact of the existing and proposed quarries located within 500m radius on the environment and are detailed in Section 7.4.

Cumulative Impact Study

The baseline monitoring conducted for this project reflects the cumulative impact of the existing quarry and impact of this proposed project on air environment do not exceed the permissible limits set by CPCB for air pollution.

The proposed project will bring 52 trips per day. The existing road can absorb this additional traffic due to this project.

11.8 PROJECT BENEFITS

Financial benefits

- This project will contribute financially through payment of taxes like royalty, GST, etc
- The project will also contribute via CSR.
- The demands of people during public hearing will also be considered by the project proponent
-

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

Social benefits

- This project provides employment to 28 people directly. Local people will be hired for unskilled labour.
- Through CSR, nearby schools, hospitals will be benefitted.

11.9 CONCLUSION

EIA study was performed as per the approved ToR. Various environmental attributes were studied relating with aspects of mining activities. The related impacts were identified and evaluated. Considering all the possible ways to mitigate the environmental concerns, Environmental Management Plan was prepared and accordingly fund was allocated. The EMP has been dynamic, flexible and subject to periodic review.

The project will increase the revenue of the State Govt. as well as it will help in the social upliftment of the local community. The green belt development programme will help in increasing the green cover in the area. Thus, the proposed project is not likely to affect the environment or adjacent ecosystem adversely.

The Mine Management will be responsible for the project review of EMP and its implementation to ensure that the EMP remains effective and appropriate. Thus, the proper steps will be taken to accomplish all the goals mentioned in the EMP and the project will bring the positive impact in the study area.

12 DISCLOSURE OF CONSULTANTS

Global Mining Solutions is a NABET Accredited EIA consultant as per NABET certificate NABET/EIA/23-26/SA 0241. The registered office of Global Mining Solutions is at Plot No.6, S.F.No.13/2 A2, VS City, RC Chettypatty, Kottamettupatty, Omalur, Salem, Tamilnadu-636455.

Declaration by Experts contributing to the proposed Rough Stone & Gravel Quarry over an extent of 1.90.50 Ha Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu.

I, hereby, certify that I was a part of the EIA team that developed the above EIA.

EIA Coordinator Name: Manikandan Manickam


Signature & Date

Period of involvement: March to May 2025.

Contact information:

M/s Global Mining Solutions

Plot No.6, SF No. 13/2, A2, VS City, RC Chettypatty,

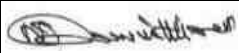
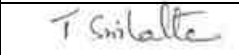
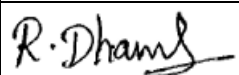
Kottamettupatty, Omalur,

Salem, Tamil Nadu – 636 455.

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

S. No.	Functional areas	Name of the expert/s	Involvement (period and task**)	Signature and Date
1	AP	Dhanalakshmi Ramanathan	Assessment of existing air quality, Impact of the project on ambient air and suggested mitigation measures for air pollution. <u>Period: March to May 2025</u>	R. Dhanalakshmi
2	WP	Abirami Kaliaperumal	Assessment of existing water quality, impact of the project on surface and ground water quality, suggested mitigation measures for minimizing the impact. <u>Period: March to May 2025</u>	K. Abirami
3	SHW	Ramadoss N	Assessment of waste generated from the project, suggested waste management practices. <u>Period: March to May 2025</u>	C. Ramadoss
4	SE	Sarasvathy K	Baseline SE study. Data compilation and assessment. Impact of the project on SE status of the area. Formulation of CER plan. <u>Period: March to May 2025</u>	K. Sarasvathy

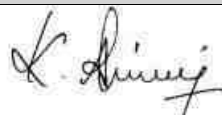
DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

5	EB	Saravanan S	Baseline data collection of related to ecology of the area. <u>Period: March to May 2025</u>	
6	HG	Ravinthiran N	Hydrogeological feature of the area. Ground water depth and impact of project on ground water of the area. <u>Period: March to May 2025</u>	
7	AQ	Srilatha Thiruveedhula	Air quality modeling utilizing the area source model. Predication of the ground level concentration of the dust. Suggesting suitable mitigation measures. <u>Period: March to May 2025</u>	
8	NV	Dhanalakshmi Ramanathan	Ambient noise study of the area. Incremental noise generation due to quarry operation and impact of the noise due to the project. <u>Period: March to May 2025.</u>	

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

9	LU	Srilatha Thiruveedhula	Preparation of land use map based on satellite imagery. Land use classification and analysis. Impact prediction of the project on the surrounding land environment. <u>Period: March to May 2025.</u>	T Srilatha
10	RH	S.V. Prashant	Identification of the Risk related to the mining activities. Preparation of emergency disaster management plan. Plan for supply of safety equipment for the worker. <u>Period: March to May 2025.</u>	Sprashant
11	SC	Shisupal Sing	Soil monitoring, secondary data collection on soil type, soil management practices, utilization of topsoil. <u>Period: March to May 2025.</u>	Shisupal Sing
12	GEO	Valliappan Meyyappan	Geological map, stability of quarry and dump, management plan for mine stability, after use of mining quarry and geological feature of the area. <u>Period: March to May 2025.</u>	Valliappan

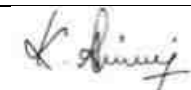
DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

TM- EC						
S.No	Name of TM (EC)	Sector(s) proposed	Approved (to work under)	Period of involvement	Type of work	Signature
1.	Abirami	1(a)	Manikandan Manickam	Period: March to May 2025.	Associated with EIA Coordinator in overall preparation of Draft EIA/EMP report.	
TM- FAE:						
S. No	Name of TM (FAE)	Functional Area	Approved FAE (to work under)	Period of involvement	Type of work	Signature
1	Kamaraj S	LU	Srilatha Thiruveedhula	Period: March to May 2025	Associated with Experts in preparing Land use map based on satellite imagery, Land use classification and analysis, Impact prediction on surrounding land environment.	
		HG	Ashok Kumar Rajagopal	Period: March to May 2025.	Associated with Experts in studying hydrogeological pattern of study area, Studying ground water and the impact of the project on ground water	

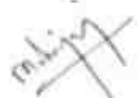
DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

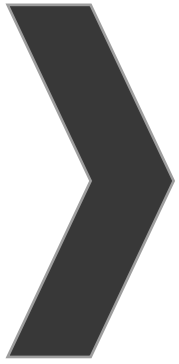
2	B.J.Sampatkkumar	SE	Saraswathy K	Period: March to May 2025.	Assisted by the Expert in preparation of socio-economic report.	
		SC	Shishupal Singh	Period: March to May 2025.	Assisted by the Expert in interpretation of soil sampling and their quality involved in the project.	
3	Mownica Balaji	NV	Dhanalakshmi Ramanathan	Period: March to May 2025.	Associated with the expert team in suggesting control measures for noise and Ground Vibration.	Mownica.B
		AP	Dhanalakshmi Ramanathan		Associated with expert team in assessing existing air quality, impact of the project on ambient air and suggesting mitigation measures for air pollution	
4	Balasubramani G	NV	Dhanalakshmi Ramanathan	Period: March to May 2025.	Associated with the expert in selection of base line monitoring stations, Review of Noise quality results, Review of emission sources – drilling, blasting, excavation and transportation, Identification of impacts on environment, identification of remedial measures and input to EIA preparation	
		Geo	Valliappan Meyyappan		Associated with the expert in preparing Geological map.	
5	Suresh Mani	LU	Srilatha Thiruveedhula		Associated with Experts in preparing Land use map based on satellite imagery, Land use classification	

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

				Period: March to May 2025.	and analysis, Impact prediction on surrounding land environment.	
		HG	Ashok Kumar Rajagopal		Associated with Experts in studying hydro-geology pattern of study area, studying water and the impact of the project on ground water.	
6	Asan Ali S	NV	Srilatha Thiruveedhula	Period: March to May 2025.	Associated with the expert in monitoring and analysis of blast induced ground vibration in order to develop the site-specific equation for its prediction, monitoring of fly rocks & air blast (noise), preparation of SOP's for the safety blasting practice in the mines.	
		Geo	Valliappan Meyyappan		Associated with the Qualified Person & Experts in preparing Geological map, assessing stability of quarry slope faces and dump, management plan for mine stability and after use of mining quarry and geological features of the area during mine plan preparation.	
7	Prabu M	Geo	Valliappan Meyyappan	Period: March to May 2025.	Associated with Experts and involved in Field Investigations, Mapping /Geo-referencing	
8	Abirami Kaliyaperumal	RH	S V Prashant	Period: March to May 2025.	Associated with experts and involved in the identification risk and hazard, suggesting safeguard measures.	

DRAFT EIA/EMP REPORT OF PROPOSED ROUGH STONE & GRAVEL QUARRY OF THIRU. B. KABILDEV S/O. BASKARAN, AT S.F.NO. S.F.NO. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F OVER AN EXTENT OF 1.90.50 HA IN GOPALAPURAM VILLAGE, VEMBAKOTTAI TALUK, VIRUDHUNAGAR DISTRICT, TAMIL NADU STATE

9	Dhanalakshmi Ramanathan	AQ	Srilatha Thiruveedhula	Period: March to May 2025	Involved with Expert team and involved in calculating air emission values using Meteorological data and Providing inputs for running modelling (ISCT3, AERMOD).	
10	Manikandan Manickam	AP	Ramadoss N	Period: March to May 2025.	Associated with expert team in assessing existing air quality, impact of the project on ambient air and suggesting mitigation measures for air pollution	
		WP	Abirami Kaliyaperumal		Involved in the identification of source of water and waste generation, suggesting treatment for safe disposal of wastewater	



ANNEXURE-1



File No: 12333
Government of India
Ministry of Environment, Forest and Climate Change
(Issued by the State Environment Impact Assessment Authority(SEIAA),
TAMIL NADU)



Dated 25/07/2025



To,

Thiru. B. Kabildev
S/o. Baskaran, No.125/2, Teachers Colony, K.R Nagar (Post), Puthupalayam, Rajapalayam Taluk,
Virudhunagar District, TAMIL NADU- 626108
kabildev1819@gmail.com

Subject: Grant of Terms of Reference along with Public Hearing under the provision of the EIA Notification 2006, as amended - regarding.

Sir/Madam,

Sub: SEIAA, Tamil Nadu – Terms of Reference along with Public Hearing (ToR) for the Proposed Rough Stone & Gravel Quarry over an extent of 1.90.50Ha of S.F. No. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E & 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu by Thiru. B. Kabildev– “B1” and Schedule S.No. 1 (a) – ToR issued along with Public Hearing- preparation of EIA report – Regarding.

Ref: 1. Online proposal No. SIA/TN/MIN/541636/2025, Dated: 17.06.2025.

2. Your application submitted for Terms of Reference dated: 19.06.2025.

3. Minutes of the 585th Meeting of SEAC held on 03.07.2025.

4. Minutes of the 856th Meeting of Authority held on 21.07.2025.

2. The particulars of the proposal are as below :

(i) TOR Identification No.	TO25B0108TN5689908N
(ii) File No.	12333
(iii) Clearance Type	TOR
(iv) Category	B1
(v) Project/Activity Included Schedule No.	1(a) Mining of minerals
(vii) Name of Project	Proposed Rough Stone & Gravel Quarry of Thiru.B.Kabildev
(viii) Name of Company/Organization	KABILDEV
(ix) Location of Project (District, State)	VIRUDHUNAGAR, TAMIL NADU
(x) Issuing Authority	SEIAA
(xi) Applicability of General Conditions	no
(xii) Applicability of Specific Conditions	no

1. In view of the particulars given in the Para 1 above, the project proposal inter alia including Form-1 (Part A and B) were submitted to the SEIAA for an appraisal by the SEAC under the provision of EIA notification 2006 and its subsequent amendments.
2. The above-mentioned proposal has been considered by SEIAA in the meeting held on 21.07.2025. The minutes of the meeting and all the Application and documents submitted [(viz. Form-1 Part A, Part B,)] are available on PARIVESH portal which can be accessed by scanning the QR Code above.
3. The State Expert Appraisal Committee (SEAC), based on the information & clarifications provided by the project proponent and after detailed deliberations on all technical aspects recommended the proposal for grant of Terms of Reference with public hearing under the provision of EIA Notification, 2006 and as amended thereof subject to the stipulation of specific and general conditions as detailed in Annexure (2).
4. The SEIAA has examined the proposal in accordance with the Environment Impact Assessment (EIA) Notification, 2006 & further amendments thereto and after accepting the recommendations of the SEAC hereby decided to issue the following Terms of Reference with public hearing for instant proposal of **Thiru.B.Kabildev** under the provisions of EIA Notification, 2006 and as amended thereof.
5. The Ministry/SEIAA-TN reserves the right to stipulate additional conditions, if found necessary.
6. The Terms of Reference with public hearing to the aforementioned project is under provisions of EIA Notification, 2006. It does not tantamount to approvals/consent/permissions etc. required to be obtained under any other Act/Rule/regulation. The Project Proponent is under obligation to obtain approvals /clearances under any other Acts/Regulations or Statutes, as applicable, to the project.
7. This issues with the approval of the Competent Authority.
8. The TORs with public hearing prescribed shall be valid for a period of three years from the date of issue, for submission of the EIA/EMP report as per OM No. J-11013/41/2006-IA-II(I)(part) dated 29th August, 2017.

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, Natural Resources 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 Chair Person, TNPC Board, 76, Mount Salai, Guindy, Chennai-32
7. The District Collector, Virudhunagar District,
8. The Commissioner of Geology and Mines, Guindy, Chennai-32
9. Assistant Director, Department of Geology & Mining, Virudhunagar District,
10. EI Division, Ministry of Environment & Forests, Parivaran Bhawan, New Delhi.
11. File Copy.

Annexure 1

Specific Terms of Reference for (Mining Of Minerals)

1. Seiaa Specific Conditions:

S. No	Terms of Reference
1.1	The Authority accepts the recommendation of SEAC-II and decided to grant Terms of Reference (ToR) along with Public Hearing for the quantity of 244,440m³ of Rough Stone & 72,930 of Gravel up to the depth of 45m BGL. The annual peak production is 42,400m³ of Rough Stone & 19,380m³ of Gravel as per the approved mining plan , under cluster for undertaking the combined Environment Impact Assessment Study and preparation of separate Environment Management Plan subject to the conditions as recommended by SEAC-II & normal conditions &

S. No	Terms of Reference
	the conditions mentioned in Annexure of this minutes.

2. Seac Conditions - Site Specific

S. No	Terms of Reference
2.1	1. A Cluster Management Committee (CMC) shall be constituted including all the mines in the cluster as Committee Members for the effective management of the mining operation in the cluster through systematic & scientific approach with appointment of statutory personnel, appropriate environmental monitoring, good maintenance of haul roads and village/panchayat roads, authorized blasting operation etc. The PP shall submit the following details in the form of an Affidavit during the EIA appraisal: (i) Copy of the agreement forming CMC. (ii) The Organisation chart of the Committee with defining the role of the members (iii) The 'Standard Operating Procedures' (SoP) executing the planned activities. 2. The Boundary pillars to be erected as per the mine rules and the evidence should be submitted along with the EIA report. 3. Since waterbodies are situated nearby, the PP shall carry out the hydrological study including the details of waterflow pattern to determine the impacts of the mining operation in the waterbodies. 4. The details of enumeration of structures including schools, colleges, primary health centres should be submitted along with the EIA report. 5. The structures within the radius of (i) 50 m, (ii) 100 m, (iii) 200 m and (iv) 300 m & upto 1km shall be enumerated with details such as dwelling houses with number of occupants, whether it belongs to the owner (or) not, places of worship, industries, factories, sheds, etc. and spell out the mitigation measures to be proposed for the protection of the above structures, if any during the quarrying operations. 6. The proponent shall furnish photographs of adequate fencing; garland drainage built with siltation tank & green belt along the periphery including replantation of existing trees; maintaining the safety distance between the adjacent quarries & water bodies nearby provided as per the approved mining plan. 7. The Proponent shall carry out Bio diversity study as a part of EIA study and the same shall be included in the Report. 8. The PP shall prepare the EMP for the entire life of mine and also furnish the sworn affidavit stating to abide the EMP for the entire life of mine. 9. The PP shall carry out the comprehensive studies on the cumulative environmental impacts of the existing & proposed quarries which included drilling & blasting, loading & hauling on the surrounding village and structures. 10. The PP shall prepare a conceptual action plan accommodating the inclusion of haul road accessibility keeping the benches intact, by ensuring the slope stability of the working benches to be constructed and existing quarry wall. 11. The PP shall install the CCTV camera for the continuous surveillance of mining activity & furnish the photographic/videographic evidence along with the EIA report.

3. Seac Conditions - Standard

S. No	Terms of Reference
3.1	TERMS OF REFERENCE (ToR) FOR GRANITE / ROUGH STONE QUARRY

S. No	Terms of Reference
	1. In the case of existing/operating mines, a letter obtained from the concerned AD (Mines) shall be submitted and it shall include the following: (i) Original pit dimension (ii) Quantity achieved Vs EC Approved Quantity (iii) Balance Quantity as per Mineable Reserve calculated. (iv) Mined out Depth as on date Vs EC Permitted depth (v) Details of illegal/illicit mining (vi) Violation in the quarry during the past working. (vii) Quantity of material mined out outside the mine lease area (viii) Condition of Safety zone/benches (ix) Revised/Modified Mining Plan showing the benches of not exceeding 6 m height and ultimate depth of not exceeding 50m. 2. Details of habitations around the proposed mining area and latest VAO certificate regarding the location of habitations within 300m radius from the periphery of the site. 3. The proponent is requested to carry out a survey and enumerate on the structures located within the radius of (i) 50 m, (ii) 100 m, (iii) 200 m and (iv) 300 m (v) 500m shall be enumerated with details such as dwelling houses with number of occupants, whether it belongs to the owner (or) not, places of worship, industries, factories, sheds, etc with indicating the owner of the building, nature of construction, age of the building, number of residents, their profession and income, etc. 4. The PP shall submit a detailed hydrological report indicating the impact of proposed quarrying operations on the waterbodies like lake, water tanks, etc are located within 1 km of the proposed quarry. 5. The Proponent shall carry out Bio diversity study through reputed Institution and the same shall be included in EIA Report. 6. The DFO letter stating that the proximity distance of Reserve Forests, Protected Areas, Sanctuaries, Tiger reserve etc., up to a radius of 25 km from the proposed site. 7. In the case of proposed lease in an existing (or old) quarry where the benches are not formed (or) partially formed as per the approved Mining Plan, the Project Proponent (PP) shall the PP shall carry out the scientific studies to assess the slope stability of the working benches to be constructed and existing quarry wall, by involving any one of the reputed Research and Academic Institutions - CSIR-Central Institute of Mining & Fuel Research / Dhanbad, NIRM/Bangalore, Division of Geotechnical Engineering-IIT-Madras, NIT-Dept of Mining Engg, Surathkal, and Anna University Chennai-CEG Campus. The PP shall submit a copy of the aforesaid report indicating the stability status of the quarry wall and possible mitigation measures during the time of appraisal for obtaining the EC. 8. However, in case of the fresh/virgin quarries, the Proponent shall submit a conceptual 'Slope Stability Plan' for the proposed quarry during the appraisal while obtaining the EC, when the depth of the working is extended beyond 30 m below ground level. 9. The PP shall furnish the affidavit stating that the blasting operation in the proposed quarry is carried out by the statutory competent person as per the MMR 1961 such as blaster, mining mate, mine foreman, II/I Class mines manager appointed by the proponent. 10. The PP shall present a conceptual design for carrying out only controlled blasting operation involving line drilling and muffle blasting in the proposed quarry such that the blast-induced ground vibrations are controlled as well as no fly rock travel beyond 30 m from the blast site. 11. The EIA Coordinators shall obtain and furnish the details of quarry/quarries operated by the proponent in the past, either in the same location or elsewhere in the State with video and photographic evidences. 12. If the proponent has already carried out the mining activity in the proposed mining lease area after 15.01.2016, then the proponent shall furnish the following details from AD/DD, mines, 13. What was the period of the operation and stoppage of the earlier mines with last work permit issued by the AD/DD mines?

S. No	Terms of Reference
	14. Quantity of minerals mined out. · Highest production achieved in any one year · Detail of approved depth of mining. · Actual depth of the mining achieved earlier. · Name of the person already mined in that leases area. · If EC and CTO already obtained, the copy of the same shall be submitted. · Whether the mining was carried out as per the approved mine plan (or EC if issued) with stipulated benches. 15. All corner coordinates of the mine lease area, superimposed on a High-Resolution Imagery/Topo sheet, topographic sheet, geomorphology, lithology and geology of the mining lease area should be provided. Such an Imagery of the proposed area should clearly show the land use and other ecological features of the study area (core and buffer zone). 16. The PP shall carry out Drone video survey covering the cluster, green belt, fencing, etc., 17. The proponent shall furnish photographs of adequate fencing, green belt along the periphery including replantation of existing trees & safety distance between the adjacent quarries & water bodies nearby provided as per the approved mining plan. 18. The Project Proponent shall provide the details of mineral reserves and mineable reserves, planned production capacity, proposed working methodology with justifications, the anticipated impacts of the mining operations on the surrounding environment, and the remedial measures for the same. 19. The Project Proponent shall provide the Organization chart indicating the appointment of various statutory officials and other competent persons to be appointed as per the provisions of the Mines Act' 1952 and the MMR, 1961 for carrying out the quarrying operations scientifically and systematically in order to ensure safety and to protect the environment. 20. The Project Proponent shall conduct the hydro-geological study considering the contour map of the water table detailing the number of groundwater pumping & open wells, and surface water bodies such as rivers, tanks, canals, ponds, etc. within 1 km (radius) along with the collected water level data for both monsoon and non-monsoon seasons from the PWD / TWAD so as to assess the impacts on the wells due to mining activity. Based on actual monitored data, it may clearly be shown whether working will intersect groundwater. Necessary data and documentation in this regard may be provided. 21. The proponent shall furnish the baseline data for the environmental and ecological parameters with regard to surface water/ground water quality, air quality, soil quality & flora/fauna including traffic/vehicular movement study. 22. The Proponent shall carry out the Cumulative impact study due to mining operations carried out in the quarry specifically with reference to the specific environment in terms of soil health, biodiversity, air pollution, water pollution, climate change and flood control & health impacts. Accordingly, the Environment Management plan should be prepared keeping the concerned quarry and the surrounding habitations in the mind. 23. Rain water harvesting management with recharging details along with water balance (both monsoon & non-monsoon) be submitted. 24. Land use of the study area delineating forest area, agricultural land, grazing land, wildlife sanctuary, national park, migratory routes of fauna, water bodies, human settlements and other ecological features should be indicated. Land use plan of the mine lease area should be prepared to encompass preoperational, operational and post operational phases and submitted. Impact, if any, of change of land use should be given. 25. Details of the land for storage of Overburden/Waste Dumps (or) Rejects outside the mine lease, such as extent of land area, distance from mine lease, its land use, R&R issues, if any, should be provided. 26. Proximity to Areas declared as 'Critically Polluted' (or) the Project areas which attracts the court restrictions for mining operations, should also be indicated and where so required, clearance

S. No	Terms of Reference
	certifications from the prescribed Authorities, such as the TNPCB (or) Dept. of Geology and Mining should be secured and furnished to the effect that the proposed mining activities could be considered. 27. Description of water conservation measures proposed to be adopted in the Project should be given. Details of rainwater harvesting proposed in the Project, if any, should be provided. 28. Impact on local transport infrastructure due to the Project should be indicated. 29. A tree survey study shall be carried out (nos., name of the species, age, diameter etc.,) both within the mining lease applied area & 300m buffer zone and its management during mining activity. 30. A detailed mine closure plan for the proposed project shall be included in EIA/EMP report which should be site-specific. 31. As a part of the study of flora and fauna around the vicinity of the proposed site, the EIA coordinator shall strive to educate the local students on the importance of preserving local flora and fauna by involving them in the study, wherever possible. 32. 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-I in consultation with the DFO, State Agriculture University. 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. 33. Taller/one year old Saplings raised in appropriate size of bags, preferably ecofriendly bags should be planted 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 34. A Disaster management Plan shall be prepared and included in the EIA/EMP Report for the complete life of the proposed quarry (or) till the end of the lease period. 35. A Risk Assessment and management Plan shall be prepared and included in the EIA/EMP Report for the complete life of the proposed quarry (or) till the end of the lease period. 36. Occupational Health impacts of the Project should be anticipated and the proposed preventive measures spelt out in detail. Details of pre-placement medical examination and periodical medical examination schedules should be incorporated in the EMP. The project specific occupational health mitigation measures with required facilities proposed in the mining area may be detailed. 37. Public health implications of the Project and related activities for the population in the impact zone should be systematically evaluated and the proposed remedial measures should be detailed along with budgetary allocations. 38. The Socio-economic studies should be carried out within a 5 km buffer zone from the mining activity. Measures of socio-economic significance and influence to the local community proposed to be provided by the Project Proponent should be indicated. As far as possible, quantitative dimensions may be given with time frames for implementation. 39. Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the Project should be given. 40. Benefits of the Project if the Project is implemented should be spelt out. The benefits of the Project shall clearly indicate environmental, social, economic, employment potential, etc. 41. If any quarrying operations were carried out in the proposed quarrying site for which now the EC is sought, the Project Proponent shall furnish the detailed compliance to EC conditions given in the previous EC with the site photographs which shall duly be certified by MoEF&CC, Regional Office, Chennai (or) the concerned DEE/TNPCB. 42. The PP shall prepare the EMP for the entire life of mine and also furnish the sworn affidavit stating to abide the EMP for the entire life of mine. 43. Concealing any factual information or submission of false/fabricated data and failure to comply

S. No	Terms of Reference
	with any of the conditions mentioned above may result in withdrawal of this Terms of Conditions besides attracting penal provisions in the Environment (Protection) Act, 1986.

4. Seiaa Standard Conditions:

S. No	Terms of Reference
4.1	<u>Cluster Management Committee</u> 1. Cluster Management Committee shall be framed which must include all the proponents in the cluster as members including the existing as well as proposed quarry. 2. The members must coordinate among themselves for the effective implementation of EMP as committed including Green Belt Development, Water sprinkling, tree plantation, blasting etc., 3. The List of members of the committee formed shall be submitted to AD/Mines before the execution of mining lease and the same shall be updated every year to the AD/Mines. 4. Detailed Operational Plan must be submitted which must include the blasting frequency with respect to the nearby quarry situated in the cluster, the usage of haul roads by the individual quarry in the form of route map and network. 5. The committee shall deliberate on risk & emergency management plan, fire safety & evacuation plan and sustainable development goals pertaining to the cluster in a holistic manner especially during natural calamities like intense rain and the mitigation measures considering the inundation of the cluster and evacuation plan. 6. The Cluster Management Committee shall form Environmental Policy to practice sustainable mining in a scientific and systematic manner in accordance with the law. The role played by the committee in implementing the Environmental policy devised shall be given in detail in the EIA Report. 7. The committee shall furnish action plan regarding the restoration strategy with respect to the individual quarry falling under the cluster in a holistic manner. 8. The committee shall deliberate on the health of the workers/staff involved in the mining as well as the health of the public in the vicinity. <u>Agriculture & Agro-Biodiversity</u> 9. Impact on surrounding agricultural fields around the proposed mining Area. 10. Impact on soil flora & vegetation around the project site. 11. Details of type of vegetation including no. of trees & shrubs within the proposed mining area and. If so, transplantation of such vegetation all along the boundary of the proposed mining area shall committed mentioned in EMP. 12. The Environmental Impact Assessment should study the agro-biodiversity, agro- forestry, horticultural plantations, the natural ecosystem, the soil micro flora, fauna and soil seed banks and suggest measures to maintain the natural Ecosystem. 13. Action should specifically suggest for sustainable management of the area and restoration of ecosystem for flow of goods and services. 14. The project proponent shall study and furnish the impact of project on plantations in adjoining patta lands, Horticulture, Agriculture and livestock. <u>Forests</u> 15. The project proponent shall detailed study on impact of mining on Reserve forests and free ranging wildlife. 16. The Environmental Impact Assessment should study impact on forest, vegetation, endemic, vulnerable and endangered indigenous flora and fauna. 17. The Environmental Impact Assessment should study impact on standing trees and the existing trees should be numbered and action suggested for protection. 18. The Environmental Impact Assessment should study impact on protected areas, Reserve Forests,

S. No	Terms of Reference
	National Parks, Corridors and Wildlife pathways, near project site. <u>Water Environment</u> 19. Hydro-geological study considering the contour map of the water table detailing the number of ground water pumping & open wells, and surface water bodies such as rivers, tanks, canals, ponds etc. within 1 km (radius) so as to assess the impacts on the nearby waterbodies due to mining activity. Based on actual monitored data, it may clearly be shown whether working will intersect groundwater. Necessary data and documentation in this regard may be provided, covering the entire mine lease period. 20. Erosion Control measures. 21. Detailed study shall be carried out in regard to impact of mining around the proposed mine lease area on the nearby Villages, Water-bodies/ Rivers, & any ecological fragile areas. 22. The project proponent shall study impact on fish habitats and the food WEB/ food chain in the water body and Reservoir. 23. The project proponent shall study and furnish the details on potential fragmentation impact on natural Environment, by the activities. 24. The project proponent shall study and furnish the impact on aquatic plants and animals in water bodies and possible scars on the landscape, damages to nearby caves, heritage site, and archaeological sites possible land form changes visual and aesthetic impacts. 25. The Terms of Reference should specifically study impact on soil health, soil erosion, the soil physical, chemical components and microbial components. 26. The Environmental Impact Assessment should study on wetlands, water bodies, rivers streams, lakes and farmer sites. 27. The EIA shall include the impact of mining activity on the following: - Hydrothermal/Geothermal effect due to destruction in the Environment. - Bio-geochemical processes and its foot prints including Environmental stress. - Sediment geochemistry in the surface streams. <u>Energy</u> 28. The measures taken to control Noise, Air, Water, Dust Control and steps adopted to efficiently utilise the Energy shall be furnished. <u>Climate Change</u> 29. The Environmental Impact Assessment shall study in detail the carbon emission and also suggest the measures to mitigate carbon emission including development of carbon sinks and temperature reduction including control of other emission and climate mitigation activities. 30. The Environmental Impact Assessment should study impact on climate change, temperature rise, pollution and above soil & below soil carbon stock, soil health and physical, chemical & biological soil features. 31. Impact of mining on pollution leading to GHGs emissions and the impact of the same on the local livelihood. <u>Mine Closure Plan</u> 32. Detailed Mine Closure Plan covering the entire mine lease period as per precise area communication order issued. <u>EMP</u> 33. Detailed Environment Management Plan along with adaptation, mitigation & remedial strategies covering the entire mine lease period as per precise area communication order issued and the scope for achieving SDGs. 34. The Environmental Impact Assessment should hold detailed study on EMP with budget for Green belt development and mine closure plan including disaster management plan. <u>Risk Assessment</u> 35. To furnish risk assessment and management plan including anticipated vulnerabilities during operational and post operational phases of Mining. <u>Disaster Management Plan</u> 36. To furnish disaster management plan and disaster mitigation measures in regard to all aspects to

S. No	Terms of Reference
	avoid/reduce vulnerability to hazards & to cope with disaster/unfavorable accidents in & around the proposed mine lease area due to the proposed method of mining activity & its related activities covering the entire mine lease period as per precise area communication order issued. Others 37. The project proponent shall furnish VAO certificate with reference to 300m radius regard to approved habitations, schools, Archaeological sites, Structures, railway lines, roads, water bodies such as streams, odai, vaari, canal, channel, river, lake pond, tank etc. 38. 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 address the concerns raised during the public consultation and all the activities proposed shall be part of the Environment Management Plan. 39. The project proponent shall study and furnish the possible pollution due to plastic and microplastic on the Environment. The ecological risks and impacts of plastic & microplastics on aquatic Environment and fresh water systems due to activities, contemplated during mining may be investigated and reported.

Standard Terms of Reference for (Mining of minerals)

1.

S. No	Terms of Reference
1.1	Year-wise production details since 1994 should be given, clearly stating the highest production achieved in any one year prior to 1994. It may also be categorically informed whether there had been any increase in production after the EIA Notification 1994 came into force, w.r.t. the highest production achieved prior to 1994
1.2	A copy of the document in support of the fact that the Proponent is the rightful lessee of the mine should be given
1.3	All documents including approved mine plan, EIA and Public Hearing should be compatible with one another in terms of the mine lease area, production levels, waste generation and its management, mining technology etc. and should be in the name of the lessee
1.4	All corner coordinates of the mine lease area, superimposed on a High Resolution Imagery/toposheet, topographic sheet, geomorphology and geology of the area should be provided. Such an Imagery of the proposed area should clearly show the land use and other ecological features of the study area (core and buffer zone)
1.5	Information should be provided in Survey of India Toposheet in 1:50,000 scale indicating geological map of the area, geomorphology of land forms of the area, existing minerals and mining history of the area, important water bodies, streams and rivers and soil characteristics
1.6	Details about the land proposed for mining activities should be given with information as to whether mining conforms to the land use policy of the State; land diversion for mining should have approval from State land use board or the concerned authority
1.7	It should be clearly stated whether the proponent Company has a well laid down Environment Policy approved by its Board of Directors? If so, it may be spelt out in the EIA Report with description of the prescribed operating process/procedures to bring into focus any infringement/deviation/ violation of the environmental or forest norms/ conditions? The hierarchical

S. No	Terms of Reference
	system or administrative order of the Company to deal with the environmental issues and for ensuring compliance with the EC conditions may also be given. The system of reporting of non-compliances / violations of environmental norms to the Board of Directors of the Company and/or shareholders or stakeholders at large, may also be detailed in the EIA Report
1.8	Issues relating to Mine Safety, including subsidence study in case of underground mining and slope study in case of open cast mining, blasting study etc. should be detailed. The proposed safeguard measures in each case should also be provided
1.9	The study area will comprise of 10 km zone around the mine lease from lease periphery and the data contained in the EIA such as waste generation etc. should be for the life of the mine / lease period
1.10	Land use of the study area delineating forest area, agricultural land, grazing land, wildlife sanctuary, national park, migratory routes of fauna, water bodies, human settlements and other ecological features should be indicated. Land use plan of the mine lease area should be prepared to encompass preoperational, operational and post operational phases and submitted. Impact, if any, of change of land use should be given
1.11	Details of the land for any Over Burden Dumps outside the mine lease, such as extent of land area, distance from mine lease, its land use, R&R issues, if any, should be given
1.12	A Certificate from the Competent Authority in the State Forest Department should be provided, confirming the involvement of forest land, if any, in the project area. In the event of any contrary claim by the Project Proponent regarding the status of forests, the site may be inspected by the State Forest Department along with the Regional Office of the Ministry to ascertain the status of forests, based on which, the Certificate in this regard as mentioned above be issued. In all such cases, it would be desirable for representative of the State Forest Department to assist the Expert Appraisal Committees
1.13	Status of forestry clearance for the broken up area and virgin forestland involved in the Project including deposition of net present value (NPV) and compensatory afforestation (CA) should be indicated. A copy of the forestry clearance should also be furnished
1.14	Implementation status of recognition of forest rights under the Scheduled Tribes and other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 should be indicated
1.15	The vegetation in the RF / PF areas in the study area, with necessary details, should be given
1.16	A study shall be got done to ascertain the impact of the Mining Project on wildlife of the study area and details furnished. Impact of the project on the wildlife in the surrounding and any other protected area and accordingly, detailed mitigative measures required, should be worked out with cost implications and submitted
1.17	Location of National Parks, Sanctuaries, Biosphere Reserves, Wildlife Corridors, Ramsar site Tiger/ Elephant Reserves/(existing as well as proposed), if any, within 10 km of the mine lease should be clearly indicated, supported by a location map duly authenticated by Chief Wildlife Warden. Necessary clearance, as may be applicable to such projects due to proximity of the ecologically sensitive areas as mentioned above, should be obtained from the Standing Committee of National Board of Wildlife and copy furnished

S. No	Terms of Reference
1.18	A detailed biological study of the study area [core zone and buffer zone (10 km radius of the periphery of the mine lease)] shall be carried out. Details of flora and fauna, endangered, endemic and RET Species duly authenticated, separately for core and buffer zone should be furnished based on such primary field survey, clearly indicating the Schedule of the fauna present. In case of any scheduled- I fauna found in the study area, the necessary plan alongwith budgetary provisions for their conservation should be prepared in consultation with State Forest and Wildlife Department and details furnished. Necessary allocation of funds for implementing the same should be made as part of the project cost
1.19	Proximity to Areas declared as Critically Polluted or the Project areas likely to come under the Aravali Range, (attracting court restrictions for mining operations), should also be indicated and where so required, clearance certifications from the prescribed Authorities, such as the SPCB or State Mining Dept. Should be secured and furnished to the effect that the proposed mining activities could be considered
1.20	Similarly, for coastal Projects, A CRZ map duly authenticated by one of the authorized agencies demarcating LTL, HTL, CRZ area, location of the mine lease w.r.t CRZ, coastal features such as mangroves, if any, should be furnished. (Note: The Mining Projects falling under CRZ would also need to obtain approval of the concerned Coastal Zone Management Authority)
1.21	R&R Plan/compensation details for the Project Affected People (PAP) should be furnished. While preparing the R&R Plan, the relevant State/National Rehabilitation & Resettlement Policy should be kept in view. In respect of SCs /STs and other weaker sections of the society in the study area, a need based sample survey, family-wise, should be undertaken to assess their requirements, and action programmes prepared and submitted accordingly, integrating the sectoral programmes of line departments of the State Government. It may be clearly brought out whether the village(s) located in the mine lease area will be shifted or not. The issues relating to shifting of village(s) including their R&R and socio-economic aspects should be discussed in the Report
1.22	One season (non-monsoon) [i.e. March-May (Summer Season); October-December (post monsoon season) ; December-February (winter season)]primary baseline data on ambient air quality as per CPCB Notification of 2009, water quality, noise level, soil and flora and fauna shall be collected and the AAQ and other data so compiled presented date-wise in the EIA and EMP Report. Site-specific meteorological data should also be collected. The location of the monitoring stations should be such as to represent whole of the study area and justified keeping in view the pre-dominant downwind direction and location of sensitive receptors. There should be at least one monitoring station within 500 m of the mine lease in the pre-dominant downwind direction. The mineralogical composition of PM10, particularly for free silica, should be given
1.23	Air quality modeling should be carried out for prediction of impact of the project on the air quality of the area. It should also take into account the impact of movement of vehicles for transportation of mineral. The details of the model used and input parameters used for modeling should be provided. The air quality contours may be shown on a location map clearly indicating the location of the site, location of sensitive receptors, if any, and the habitation. The wind roses showing pre-dominant wind direction may also be indicated on the map
1.24	The water requirement for the Project, its availability and source should be furnished. A detailed water balance should also be provided. Fresh water requirement for the Project should be indicated
1.25	Necessary clearance from the Competent Authority for drawl of requisite quantity of water for the Project should be provided

S. No	Terms of Reference
1.26	Description of water conservation measures proposed to be adopted in the Project should be given. Details of rainwater harvesting proposed in the Project, if any, should be provided
1.27	Impact of the Project on the water quality, both surface and groundwater, should be assessed and necessary safeguard measures, if any required, should be provided
1.28	Based on actual monitored data, it may clearly be shown whether working will intersect groundwater. Necessary data and documentation in this regard may be provided. In case the working will intersect groundwater table, a detailed Hydro Geological Study should be undertaken and Report furnished. The Report inter-alia, shall include details of the aquifers present and impact of mining activities on these aquifers. Necessary permission from state Ground Water Authority for working below ground water and for pumping of ground water should also be obtained and copy furnished
1.29	Details of any stream, seasonal or otherwise, passing through the lease area and modification / diversion proposed, if any, and the impact of the same on the hydrology should be brought out
1.30	Information on site elevation, working depth, groundwater table etc. Should be provided both in AMSL and bgl. A schematic diagram may also be provided for the same
1.31	A time bound Progressive Greenbelt Development Plan shall be prepared in a tabular form (indicating the linear and quantitative coverage, plant species and time frame) and submitted, keeping in mind, the same will have to be executed up front on commencement of the Project. Phase-wise plan of plantation and compensatory afforestation should be charted clearly indicating the area to be covered under plantation and the species to be planted. The details of plantation already done should be given. The plant species selected for green belt should have greater ecological value and should be of good utility value to the local population with emphasis on local and native species and the species which are tolerant to pollution
1.32	Impact on local transport infrastructure due to the Project should be indicated. Projected increase in truck traffic as a result of the Project in the present road network (including those outside the Project area) should be worked out, indicating whether it is capable of handling the incremental load. Arrangement for improving the infrastructure, if contemplated (including action to be taken by other agencies such as State Government) should be covered. Project Proponent shall conduct Impact of Transportation study as per Indian Road Congress Guidelines
1.33	Details of the onsite shelter and facilities to be provided to the mine workers should be included in the EIA Report
1.34	Conceptual post mining land use and Reclamation and Restoration of mined out areas (with plans and with adequate number of sections) should be given in the EIA report
1.35	Occupational Health impacts of the Project should be anticipated and the proposed preventive measures spelt out in detail. Details of pre-placement medical examination and periodical medical examination schedules should be incorporated in the EMP. The project specific occupational health mitigation measures with required facilities proposed in the mining area may be detailed
1.36	Public health implications of the Project and related activities for the population in the impact zone should be systematically evaluated and the proposed remedial measures should be detailed along with budgetary allocations

S. No	Terms of Reference
1.37	Measures of socio economic significance and influence to the local community proposed to be provided by the Project Proponent should be indicated. As far as possible, quantitative dimensions may be given with time frames for implementation
1.38	Detailed environmental management plan (EMP) to mitigate the environmental impacts which, should inter-alia include the impacts of change of land use, loss of agricultural and grazing land, if any, occupational health impacts besides other impacts specific to the proposed Project
1.39	Public Hearing points raised and commitment of the Project Proponent on the same along with time bound Action Plan with budgetary provisions to implement the same should be provided and also incorporated in the final EIA/EMP Report of the Project
1.40	Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the Project should be given
1.41	The cost of the Project (capital cost and recurring cost) as well as the cost towards implementation of EMP should be clearly spelt out
1.42	A Disaster management Plan shall be prepared and included in the EIA/EMP Report
1.43	Benefits of the Project if the Project is implemented should be spelt out. The benefits of the Project shall clearly indicate environmental, social, economic, employment potential, etc
1.44	Besides the above, the below mentioned general points are also to be followed:- a) All documents to be properly referenced with index and continuous page numbering. b) Where data are presented in the Report especially in Tables, the period in which the data were collected and the sources should be indicated. c) Project Proponent shall enclose all the analysis/testing reports of water, air, soil, noise etc. using the MoEF&CC/NABL accredited laboratories. All the original analysis/testing reports should be available during appraisal of the Project. d) Where the documents provided are in a language other than English, an English translation should be provided. e) The Questionnaire for environmental appraisal of mining projects as devised earlier by the Ministry shall also be filled and submitted. f) While preparing the EIA report, the instructions for the Proponents and instructions for the Consultants issued by MoEF vide O.M. No. J-11013/41/2006-IA.II(I) dated 4th August, 2009, which are available on the website of this Ministry, should be followed. g) Changes, if any made in the basic scope and project parameters (as submitted in Form-I and the PFR for securing the TOR) should be brought to the attention of MoEF&CC with reasons for such changes and permission should be sought, as the TOR may also have to be altered. Post Public Hearing changes in structure and content of the draft EIA/EMP (other than modifications arising out of the P.H. process) will entail conducting the PH again with the revised documentation. h) As per the circular no. J-11011/618/2010-IA.II(I) dated 30.5.2012, certified report of the status of compliance of the conditions stipulated in the environment clearance for the existing operations of the project, should be obtained from the Regional Office of Ministry of Environment, Forest and Climate Change, as may be applicable. i) The EIA report should also include (i) surface plan of the area indicating contours of main topographic features, drainage and mining area, (ii) geological maps and sections and (iii) sections of the mine pit and external dumps, if any, clearly showing the land features of the adjoining area

A. STANDARD TERMS OF REFERENCE

- 1) Year-wise production details since 1994 should be given, clearly stating the highest production achieved in any one year prior to 1994. It may also be categorically informed whether there had been any increase in production after the EIA Notification 1994 came into force, w.r.t. the highest production achieved prior to 1994.
- 2) A copy of the document in support of the fact that the Proponent is the rightful lessee of the mine should be given.
- 3) All documents including approved mine plan, EIA and Public Hearing should be compatible with one another in terms of the mine lease area, production levels, waste generation and its management, mining technology etc. and should be in the name of the lessee.
- 4) All corner coordinates of the mine lease area, superimposed on a High-Resolution Imagery/ topo sheet, topographic sheet, geomorphology and geology of the area should be provided. Such an Imagery of the proposed area should clearly show the land use and other ecological features of the study area (core and buffer zone).
- 5) Information should be provided in Survey of India Topo sheet in 1:50,000 scale indicating geological map of the area, geomorphology of land forms of the area, existing minerals and mining history of the area, important water bodies, streams and rivers and soil characteristics.
- 6) Details about the land proposed for mining activities should be given with information as to whether mining conforms to the land use policy of the State; land diversion for mining should have approval from State land use board or the concerned authority.
- 7) It should be clearly stated whether the proponent Company has a well laid down Environment Policy approved by its Board of Directors? If so, it may be spelt out in the EIA Report with description of the prescribed operating process/procedures to bring into focus any infringement/deviation/ violation of the environmental or forest norms/ conditions? The hierarchical system or administrative order of the Company to deal with the environmental issues and for ensuring compliance with the EC conditions may also be given. The system of reporting of non-compliances / violations of environmental norms to the Board of Directors of the Company and/or shareholders or stakeholders at large, may also be detailed in the EIA Report.
- 8) Issues relating to Mine Safety, including subsidence study in case of underground mining

and slope study in case of open cast mining, blasting study etc. should be detailed. The proposed safeguard measures in each case should also be provided.

- 9) The study area will comprise of 10 km zone around the mine lease from lease periphery and the data contained in the EIA such as waste generation etc. should be for the life of the mine / lease period.
- 10) Land use of the study area delineating forest area, agricultural land, grazing land, wildlife sanctuary, national park, migratory routes of fauna, water bodies, human settlements and other ecological features should be indicated. Land use plan of the mine lease area should be prepared to encompass preoperational, operational and post operational phases and submitted. Impact, if any, of change of land use should be given.
- 11) Details of the land for any Over Burden Dumps outside the mine lease, such as extent of land area, distance from mine lease, its land use, R&R issues, if any, should be given.
- 12) Certificate from the Competent Authority in the State Forest Department should be provided, confirming the involvement of forest land, if any, in the project area. In the event of any contrary claim by the Project Proponent regarding the status of forests, the site may be inspected by the State Forest Department along with the Regional Office of the Ministry to ascertain the status of forests, based on which, the Certificate in this regard as mentioned above be issued. In all such cases, it would be desirable for representative of the State Forest Department to assist the Expert Appraisal Committees.
- 13) Status of forestry clearance for the broken-up area and virgin forestland involved in the Project including deposition of Net Present Value (NPV) and Compensatory Afforestation (CA) should be indicated. A copy of the forestry clearance should also be furnished.
- 14) Implementation status of recognition of forest rights under the Scheduled Tribes and other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 should be indicated.
- 15) The vegetation in the RF / PF areas in the study area, with necessary details, should be given.
- 16) A study shall be got done to ascertain the impact of the Mining Project on wildlife of the study area and details furnished. Impact of the project on the wildlife in the surrounding and any other protected area and accordingly, detailed mitigative measures required, should be worked out with cost implications and submitted.
- 17) Location of National Parks, Sanctuaries, Biosphere Reserves, Wildlife Corridors, Ramsar site Tiger/ Elephant Reserves/(existing as well as proposed), if any, within 10 km of the mine

lease should be clearly indicated, supported by a location map duly authenticated by Chief Wildlife Warden. Necessary clearance, as may be applicable to such projects due to proximity of the ecologically sensitive areas as mentioned above, should be obtained from the Standing Committee of National Board of Wildlife and copy furnished.

- 18) A detailed biological study of the study area [core zone and buffer zone (10 km radius of the periphery of the mine lease)] shall be carried out. Details of flora and fauna, endangered, endemic and RET Species duly authenticated, separately for core and buffer zone should be furnished based on such primary field survey, clearly indicating the Schedule of the fauna present. In case of any scheduled-I fauna found in the study area, the necessary plan along with budgetary provisions for their conservation should be prepared in consultation with State Forest and Wildlife Department and details furnished. Necessary allocation of funds for implementing the same should be made as part of the project cost.
- 19) Proximity to Areas declared as 'Critically Polluted' or the Project areas likely to come under the 'Aravali Range', (attracting court restrictions for mining operations), should also be indicated and where so required, clearance certifications from the prescribed Authorities, such as the SPCB or State Mining Department should be secured and furnished to the effect that the proposed mining activities could be considered.
- 20) Similarly, for Coastal Projects, a CRZ map duly authenticated by one of the authorized agencies demarcating LTL, HTL, CRZ area, location of the mine lease with respect to CRZ, coastal features such as mangroves, if any, should be furnished. (Note: The Mining Projects falling under CRZ would also need to obtain approval of the concerned Coastal Zone Management Authority).
- 21) R&R Plan/compensation details for the Project Affected People (PAP) should be furnished. While preparing the R&R Plan, the relevant State/National Rehabilitation & Resettlement Policy should be kept in view. In respect of SCs /STs and other weaker sections of the society in the study area, a need based sample survey, family-wise, should be undertaken to assess their requirements, and action programmes prepared and submitted accordingly, integrating the sectoral programmes of line departments of the State Government. It may be clearly brought out whether the village(s) located in the mine lease area will be shifted or not. The issues relating to shifting of village(s) including their R&R and socio-economic aspects should be discussed in the Report.

- 22) One season (non-monsoon) [i.e. March-May (Summer Season); October-December (post monsoon season); December-February (winter season)] primary baseline data on ambient air quality as per CPCB Notification of 2009, water quality, noise level, soil and flora and fauna shall be collected and the AAQ and other data so compiled presented date-wise in the EIA and EMP Report. Site-specific meteorological data should also be collected. The location of the monitoring stations should be such as to represent whole of the study area and justified keeping in view the pre-dominant downwind direction and location of sensitive receptors. There should be at least one monitoring station within 500 m of the mine lease in the pre-dominant downwind direction. The mineralogical composition of PM10, particularly for free silica, should be given.
- 23) Air quality modeling should be carried out for prediction of impact of the project on the air quality of the area. It should also take into account the impact of movement of Vehicles for transportation of mineral. The details of the model used and input parameters used for modeling should be provided. The air quality contours may be shown on a location map clearly indicating the location of the site, location of sensitive receptors, if any, and the habitation. The wind roses showing pre-dominant wind direction may also be indicated on the map.
- 24) The water requirement for the Project, its availability and source should be furnished. A detailed water balance should also be provided. Fresh water requirement for the Project should be indicated.
- 25) Necessary clearance from the Competent Authority for drawl of requisite quantity of water for the Project should be provided.
- 26) Description of water conservation measures proposed to be adopted in the Project should be given. Details of rainwater harvesting proposed in the Project, if any, should be provided.
- 27) Impact of the Project on the water quality, both surface and groundwater, should be assessed and necessary safeguard measures, if any required, should be provided.
- 28) Based on actual monitored data, it may clearly be shown whether working will intersect groundwater. Necessary data and documentation in this regard may be provided. In case the working will intersect groundwater table, a detailed Hydro Geological Study should be undertaken and Report furnished. The Report inter-alia, shall include details of the aquifers present and impact of mining activities on these aquifers. Necessary permission from Central

Ground Water Authority for working below ground water and for pumping of ground water should also be obtained and copy furnished.

- 29) Details of any stream, seasonal or otherwise, passing through the lease area and modification / diversion proposed, if any, and the impact of the same on the hydrology should be brought out.
- 30) Information on site elevation, working depth, groundwater table etc. Should be provided both in AMSL and Bgl. A schematic diagram may also be provided for the same.
- 31) A time bound Progressive Greenbelt Development Plan shall be prepared in a tabular form (indicating the linear and quantitative coverage, plant species and time frame) and submitted, keeping in mind, the same will have to be executed up front on commencement of the Project. Phase-wise plan of plantation and compensatory afforestation should be charted clearly indicating the area to be covered under plantation and the species to be planted. The details of plantation already done should be given. The plant species selected for green belt should have greater ecological value and should be of good utility value to the local population with emphasis on local and native species and the species which are tolerant to pollution.
- 32) Impact on local transport infrastructure due to the Project should be indicated. Projected increase in truck traffic as a result of the Project in the present road network (including those outside the Project area) should be worked out, indicating whether it is capable of handling the incremental load. Arrangement for improving the infrastructure, if contemplated (including action to be taken by other agencies such as State Government) should be covered. Project Proponent shall conduct Impact of Transportation study as per Indian Road Congress Guidelines.
- 33) Details of the onsite shelter and facilities to be provided to the mine workers should be included in the EIA Report.
- 34) Conceptual post mining land use and Reclamation and Restoration of mined out areas (with plans and with adequate number of sections) should be given in the EIA report.
- 35) Occupational Health impacts of the Project should be anticipated and the proposed preventive measures spelt out in detail. Details of pre-placement medical examination and periodical medical examination schedules should be incorporated in the EMP. The project specific occupational health mitigation measures with required facilities proposed in the mining area may be detailed.

- 36) Public health implications of the Project and related activities for the population in the impact zone should be systematically evaluated and the proposed remedial measures should be detailed along with budgetary allocations.
- 37) Measures of socio-economic significance and influence to the local community proposed to be provided by the Project Proponent should be indicated. As far as possible, quantitative dimensions may be given with time frames for implementation.
- 38) Detailed Environmental Management Plan (EMP) to mitigate the environmental impacts which, should inter-alia include the impacts of change of land use, loss of agricultural and grazing land, if any, occupational health impacts besides other impacts specific to the proposed Project.
- 39) Public Hearing points raised and commitment of the Project Proponent on the same along with time bound Action Plan with budgetary provisions to implement the same should be provided and also incorporated in the final EIA/EMP Report of the Project.
- 40) Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the Project should be given.
- 41) The cost of the Project (capital cost and recurring cost) as well as the cost towards implementation of EMP should be clearly spelt out.
- 42) A Disaster management Plan shall be prepared and included in the EIA/EMP Report.
- 43) Benefits of the Project if the Project is implemented should be spelt out. The benefits of the Project shall clearly indicate environmental, social, economic, employment potential, etc.
- 44) Besides the above, the below mentioned general points are also to be followed: -
 - a) Executive Summary of the EIA/EMP Report
 - b) All documents to be properly referenced with index and continuous page numbering.
 - c) Where data are presented in the Report especially in Tables, the period in which the data were collected and the sources should be indicated.
 - d) Project Proponent shall enclose all the analysis/testing reports of water, air, soil, noise etc. using the MoEF&CC/NABL accredited laboratories. All the original analysis/testing reports should be available during appraisal of the Project.
 - e) Where the documents provided are in a language other than English, an English translation should be provided.
 - f) The Questionnaire for environmental appraisal of mining projects as devised earlier

by the Ministry shall also be filled and submitted.

- g) While preparing the EIA report, the instructions for the Proponents and instructions for the Consultants issued by MoEF&CC vide O.M. No. J-11013/41/2006-IA. II(I) dated 4th August, 2009, which are available on the website of this Ministry, should be followed.
- h) Changes, if any made in the basic scope and project parameters (as submitted in Form-I and the PFR for securing the TOR) should be brought to the attention of MoEF&CC with reasons for such changes and permission should be sought, as the ToR may also have to be altered. Post Public Hearing changes in structure and content of the draft EIA/EMP (other than modifications arising out of the P.H. process) will entail conducting the PH again with the revised documentation.
- i) As per the circular no. J-11011/618/2010-IA. II(I) dated 30.5.2012, certified report of the status of compliance of the conditions stipulated in the Environment Clearance for the existing operations of the project, should be obtained from the Regional Office of Ministry of Environment, Forest and Climate Change, as may be applicable.
- j) The EIA report should also include (i) surface plan of the area indicating contours of main topographic features, drainage and mining area, (ii) geological maps and sections and (iii) sections of the mine pit and external dumps, if any, clearly showing the land features of the adjoining area.

In addition to the above, the following shall be furnished: -

The Executive summary of the EIA/EMP report in about 8-10 pages should be prepared incorporating the information on following points:

1. Project name and location (Village, District, State, Industrial Estate (if applicable)).
2. Process description in brief, specifically indicating the gaseous emission, liquid effluent and solid and hazardous wastes.
3. Measures for mitigating the impact on the environment and mode of discharge or disposal.
4. Capital cost of the project, estimated time of completion.
5. The proponent shall furnish the contour map of the water table detailing the number of wells located around the site and impacts on the wells due to mining activity.
6. A detailed study of the lithology of the mining lease area shall be furnished.
7. Details of village map, "A" register and FMB sketch shall be furnished.

8. Detailed mining closure plan for the proposed project approved by the Geology of Mining department shall be submitted along with EIA report.
9. Obtain a letter /certificate from the Assistant Director of Geology and Mining stating that there is no other Minerals/resources like sand in the quarrying area within the approved depth of mining and below depth of mining and the same shall be furnished in the EIA report.
10. EIA report should strictly follow the Environmental Impact Assessment Guidance Manual for Mining of Minerals published February 2010.
11. Detail plan on rehabilitation and reclamation carried out for the stabilization and restoration of the mined areas.
12. The EIA study report shall include the surrounding mining activity, if any.
13. Modeling study for Air, Water and noise shall be carried out in this field and incremental increase in the above study shall be substantiated with mitigation measures.
14. A study on the geological resources available shall be carried out and reported.
15. A specific study on agriculture & livelihood shall be carried out and reported.
16. Impact of soil erosion, soil physical chemical and biological property changes may be assumed.
17. Site selected for the project - Nature of land - Agricultural (single/double crop), barren, Govt./ private land, status of acquisition, nearby (in 2-3 km.) water body, population, within 10km other industries, forest, eco-sensitive zones, accessibility, (note - in case of industrial estate this information may not be necessary)
18. Baseline environmental data - air quality, surface and ground water quality, soil characteristic, flora and fauna, socio-economic condition of the nearby population
19. Identification of hazards in handling, processing and storage of hazardous material and safety system provided to mitigate the risk.
20. Likely impact of the project on air, water, land, flora-fauna and nearby population
21. Emergency preparedness plan in case of natural or in plant emergencies
22. Issues raised during public hearing (if applicable) and response given
23. CER plan with proposed expenditure.
24. Occupational Health Measures
25. Post project monitoring plan
26. The project proponent shall carry out detailed hydro geological study through

intuitions/NABET Accredited agencies.

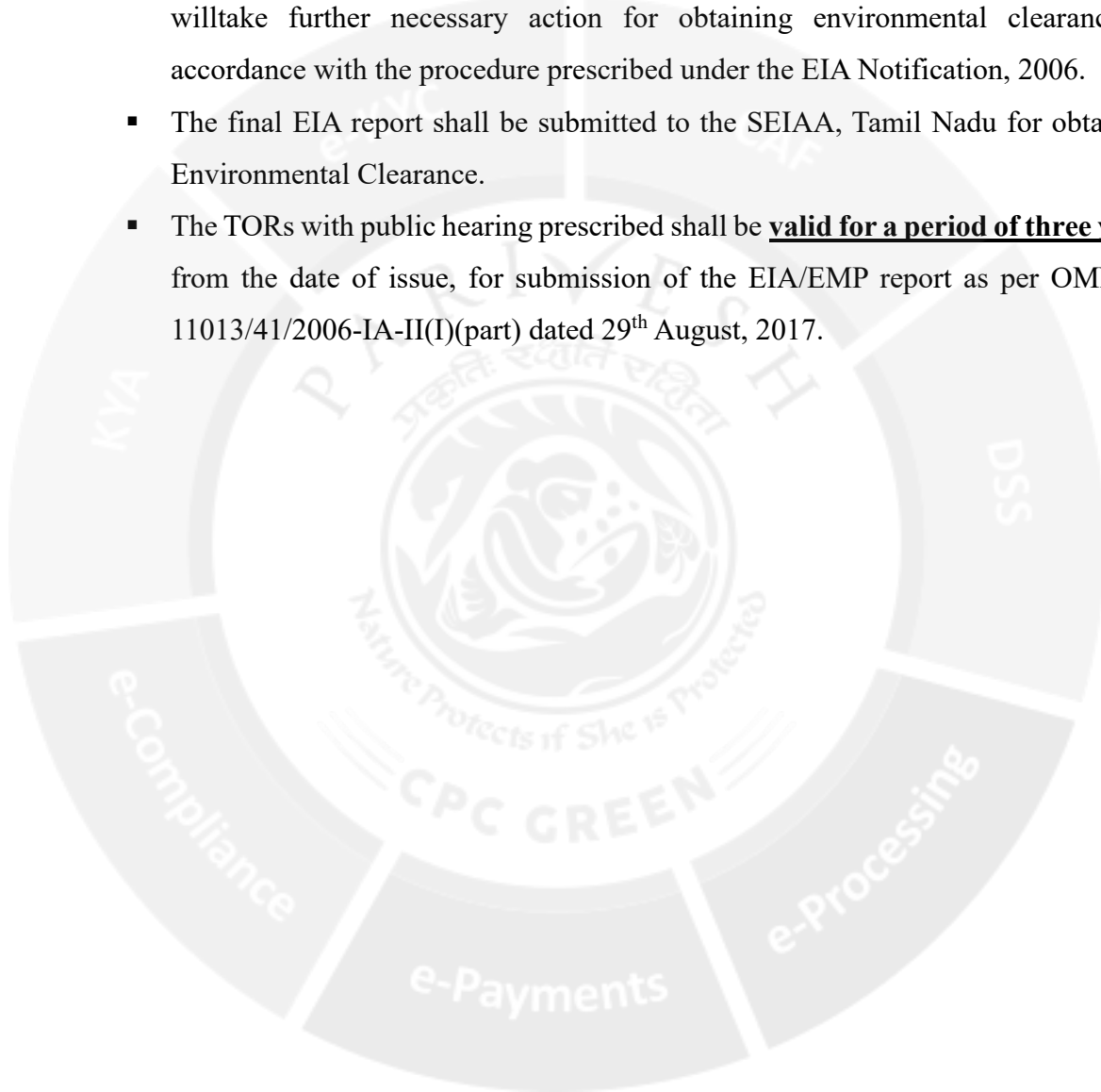
27. A detailed report on the green belt development already undertaken is to be furnished and also submit the proposal for green belt activities.
28. The proponent shall propose the suitable control measure to control the fugitive emissions during the operations of the mines.
29. A specific study should include impact on flora & fauna, disturbance to migratory pattern of animals.
30. Reserve funds should be earmarked for proper closure plan.
31. A detailed plan on plastic waste management shall be furnished. Further, the proponent should strictly comply with, Tamil Nadu Government Order (Ms) No.84 Environment and forests (EC.2) Department dated 25.06.2018 regarding ban on one time use and throw away plastics irrespective of thickness with effect from 01.01.2019 under Environment (Protection) Act, 1986. In this connection, the project proponent has to furnish the action plan.

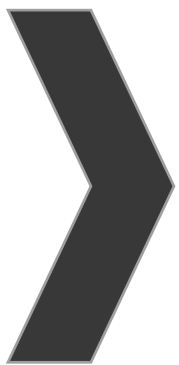
Besides the above, the below mentioned general points should also be followed: -

- a. A note confirming compliance of the TOR, with cross referencing of the relevant sections / pages of the EIA report should be provided.
- b. All documents may be properly referenced with index, page numbers and continuous page numbering.
- c. Where data are presented in the report especially in tables, the period in which the data were collected and the sources should be indicated.
- d. While preparing the EIA report, the instructions for the proponents and instructions for the consultants issued by MoEF& CC vide O.M. No. J-11013/41/2006-IA.II (I) dated 4th August, 2009, which are available on the website of this Ministry should also be followed.
- e. The consultants involved in the preparation of EIA/EMP report after accreditation with Quality Council of India (QCI)/National Accreditation Board of Education and Training (NABET) would need to include a certificate in this regard in the EIA/EMP reports prepared by them and data provided by other organization/Laboratories including their status of approvals etc. In this regard circular no F. No.J -11013/77/2004-IA-II(I) dated 2nd December, 2009, 18th March 2010, 28th May 2010, 28th June 2010, 31st December 2010 &

30th September 2011 posted on the Ministry's website <http://www.moef.nic.in/> may be referred.

- After preparing the EIA (as per the generic structure prescribed in Appendix-III of the EIA Notification, 2006) covering the above-mentioned points, the proponent will take further necessary action for obtaining environmental clearance in accordance with the procedure prescribed under the EIA Notification, 2006.
- The final EIA report shall be submitted to the SEIAA, Tamil Nadu for obtaining Environmental Clearance.
- The TORs with public hearing prescribed shall be **valid for a period of three years** from the date of issue, for submission of the EIA/EMP report as per OMNo.J-11013/41/2006-IA-II(I)(part) dated 29th August, 2017.





ANNEXURE-2

புவியியல் மற்றும் சுரங்கத்துறை

ந.க.எண்:கேவி1/1216/2024

உதவி இயக்குநர் அலுவலகம்,
மாவட்ட ஆட்சியர் அலுவலக வளாகம்,
விருதுநகர்.

நாள்:16.05 .2025.



குறிப்பாணை

பொருள்: கனிமங்களும் குவாரிகளும் - விருதுநகர் மாவட்டம் - வெம்பக்கோட்டை வட்டம் - கோபாலபுரம் கிராமம் பட்டா புலஎண்கள்- 623/1C (0.1.00), 623/1D (0.3.00), 623/1G (0.3.00), 623/2A (0.1.50), 623/28 (0.42.00), 623/2C (0.46.50), 623/1A (0.18.00), 623/18 (0.17.50), 623/1E (0.28.50) 0 623/1F (0.29.50) மொத்த விஸ்தீரணம் 1.90.50 ஹெக்டேர் பரப்பு நிலங்களில் பத்து வருடங்களுக்கு உடைகல் மற்றும் கிராவல் குவாரி உரிமம் வழங்கல் - உகந்த பரப்பு (Precise Area) தேர்வு செய்யப்பட்டது - சுரங்கத்திட்டம் மற்றும் மாநில அளவிலான சுற்றுச்சூழல் தாக்க மதிப்பீட்டு ஆணையத்தின் இசைவினைப் பெற்று சமர்ப்பிக்க கோருவது - தொடர்பாக.

- பார்வை: 1. திரு.கபில்தேவ் த/பெ பாஸ்கரன்,1/57 கோபாலபுரம்,வெம்பக்கோட்டை வட்டம் என்பவரது விண்ணப்பம் நாள்: 05.11.2024.
2. இவ்வலுவலக கடிதம் எண் ந.க.கேவி1/1216/2024, நாள்: 09.11.2024 (வருவாய் கோட்டாட்சியர், சாத்தூர் அவர்களுக்கு முகவரியிட்டது).
3. சாத்தூர், வருவாய் கோட்டாட்சியர் கடித எண் மூ.மு..அ2/6346/2024, நாள்: 17.04.2025.
4. உதவி இயக்குநர், புவியியல் மற்றும் சுரங்கத்துறை அவர்களின் புலத்தணிக்கை அறிக்கை நாள்: 13.05.2025.
5. 1959 -ம் வருடத்திய தமிழ்நாடு சிறுகனிம சலுகை விதிகள் 41 மற்றும் 42.
6. அரசாணை எண்.169 தொழில் (எம்.எம்.சி.1) துறை, நாள்: 04.08.2020.
7. தொடர்புடைய ஆவணங்கள்.



விருதுநகர் மாவட்டம் - வெம்பக்கோட்டை வட்டம் - கோபாலபுரம் கிராமம் பட்டா
புலஎண்கள்- 623/1C (0.1.00), 623/1D (0.3.00), 623/1G (0.3.00), 623/2A (0.1.50),
623/28 (0.42.00), 623/2C (0.46.50), 623/1A (0.18.00), 623/18 (0.17.50), 623/1E
(0.28.50) 0 623/1F (0.29.50) மொத்த விஸ்தீரணம் 1.90.50 ஹெக்டேர் பரப்பு
நிலங்களில் பத்து வருடங்களுக்கு உடைகல் மற்றும் கிராவல் குவாரி குத்தகை உரிமம்
கோரி விருதுநகர் மாவட்டம், ராஜப்பாளையம் வட்டம், புதுப்பாளையம், கே.ஆர் நகர் (post)
, டீச்சர்ஷ் காலனி 125/2-யில் வசித்து வரும், திரு.கபில்தேவ் த/பெ பாஸ்கரன், என்பவர்
பார்வை 1-ல் காணும் விண்ணப்பத்தினை உரிய ஆவணங்களுடன் சமர்ப்பித்துள்ளார்.

சாத்தூர், வருவாய் கோட்டாட்சியர், அவர்களின் அறிக்கையில் கல்குவாரி உரிமம்
வழங்கக் கோரியுள்ள புல எண்கள் வெம்பக்கோட்டை வட்டம், கோபாலபுரம் கிராமம்
பட்டா எண் : 2440 மற்றும் 2450-ல் புலஎண்கள்- 623/1C (0.1.00), 623/1D (0.3.00),
623/1G (0.3.00), 623/2A (0.1.50), 623/2B (0.42.00), 623/2C (0.46.50), 623/1A
(0.18.00), 623/1B (0.17.50), 623/1E (0.28.50) 0 623/1F (0.29.50) மொத்த விஸ்தீரணம்
1.90.50 ஹெக்டேர் பரப்பு நிலம் திரு.கபில்தேவ் த/பெ பாஸ்கரன் என்ற பெயரில்
கோபாலபுரம் கிராமக்கணக்கில் தாக்கலாகியுள்ளது எனவும்,

மனுதாரர் குவாரி உரிமம் வழங்கக் கோரிய புலங்களுக்கு நான்குமால் விபரம்

வடக்கு - புல எண். 611 -வண்டிப்பாதை,

தெற்கு புல எண்.627/1, 628 பொன்னுச்சாமி நாயக்கர் வகை (ம) சீனியம்மான்,

கிழக்கு -புல எண்.624 - தீர்வை ஏற்படாத தரிசு,

மேற்கு -புல எண்.622/4, 5 விநாயக மூர்த்தி, எனவும்,

குவாரி குத்தகை உரிமம் வழங்கக் கோரும் புலங்களில் எல்லைகள்
வரையறுக்கப்பட்டு எல்லை கற்கள் நடப்பட்டுள்ளன. குவாரி குத்தகை உரிமம் வழங்கக்
கோரும் புலத்திலிருந்து 500 மீ சுற்றளவில் கிராம நத்தம், அங்கீகரிக்கப்பட்ட
குடியிருப்புகள், கட்டுமானங்கள், ஆறுகள், கண்மாய்கள், வனப்பகுதிகள், சரணாலயங்கள்,
புரதானச் சின்னங்கள் ஏதும் இல்லை.குவாரி அமையப்பெறவுள்ள கூட்டுப்புலத்திற்கு
கிழக்கே புல எண்.624-ல் தீர்வை ஏற்படாத தரி நிலத்தின் மேல் ஓரத்தில் சில்லோடை (ம)
முடிவடைந்த அரசு குவாரி உள்ளது. மேலும், வடபுறம் சுமார் 200 மீ சுற்றளவில்
அமைந்துள்ள புல எண்கள். 586/11, 12, 13, 14, 15, 17,18 ஆகியவற்றில்
திரு.சண்முகவேல் என்பவரின் முடிவடைந்த குவாரியும், வடகிழக்கில் அமைந்துள்ள புல
எண்கள் 574, 559, 558/1, 2, 557/1, 2 ஆகியவற்றில் திரு.ராஜமோகன் என்பவருக்குச்
சொந்தமான செயல்படும் குவாரி ஒன்றும், தென்கிழக்கில் சுமார் 420 மீ-க்கு அப்பால்
அமைந்துள்ள புல எண்கள். 567/2யு 568/18 ஆகியவற்றில் திரு.ஆறுமுகம் என்பவருக்குச்



சொந்தமான செயல்படும் கல்குவாரியும், தென்மேற்கில் சுமார் 200 மீட்டர் அமைந்துள்ள புல எண்கள் 635/4 மற்றும் 636 ஆகியவற்றில் திருமருகேசன் என்பவரது, செயல்படும் கல்குவாரியும் அமைந்துள்ளது எனவும்,

தாவா வழக்கு எவையேனும் குவாரி குத்தகை உரிமம் கோரும் புலத்தில் இல்லை. குவாரி அமையப்பெறவுள்ள புலங்கள் அரசின் நில எடுப்பு பிரேரணையில் மற்றும் தடையாணை புத்தகத்தில் இடம் பெறவில்லை. குவாரி குத்தகை உரிமம் கோரும் கூட்டுப்புலத்தில் புல எண்கள் 623/2B, 623/2C ஆகியவற்றில் சென்ற விவசாய மின் இணைப்பு கம்பிகள், மின்கம்பங்கள், மின்வாரிய துறையின்மூலம் அகற்றப்பட்டுவிட்டது. மேற்கண்ட குவாரி அமைய உள்ள கிராமத்தில் "அ1" நோட்டீஸ் விளம்பரம் செய்யப்பட்டதில், நாளது தேதிவரை பொதுமக்களிடமிருந்து ஆட்சேபணை ஏதும்வரப்பெறவில்லை. மனுதாரர் குவாரி உரிமம் கோரும் புலமானது வெம்பக்கோட்டை ஊராட்சி ஒன்றியத்தைச் சேர்ந்த கோபாலபுரம் ஊராட்சிக்கு உட்பட்டது எனவும்,

எனவே, விருதுநகர் மாவட்டம், வெம்பக்கோட்டை வட்டம், கோபாலபுரம் கிராமம், புல எண்கள் 623/1C (0.1.00), 623/1D (0.3.00), 623/1G (0.3.00), 623/2A (0.1.50), 623/2B (0.42.00), 623/2C (0.46.50), 623/1A (0.18.00), 623/18 (0.17.50), 623/1E (0.28.50) 0 623/1F (0.29.50) விஸ்தீரணம் 1.90.50 ஹெக்டேர்ஸ் பரப்பளவில் பத்து (10) வருடங்களுக்கு உடைகல் மற்றும் கிராவல் மண் வெட்டியெடுக்க திரு.கபில்தேவ், த/பெ. பாஸ்கரன் என்பவருக்கு தமிழ்நாடு சிறுகனிம விதிகளின்படி அனுமதி வழங்கப் பரிந்துரை செய்கிறேன் என்பதைப் பணிவுடன் தெரிவித்துள்ளார்.

உதவி இயக்குநர் , புவியியல் மற்றும் சுரங்கத்துறை, அவர்களின் அறிக்கையில் விண்ணப்பிக்கப்பட்ட புலங்கள் புஞ்சை வகைப்பாடுடைய தரிசு நிலங்களாகும். புலங்களின் மேற்பரப்பு சமதளமாகவும், விவசாய பணிகள் ஏதுமின்றி தரிசாக உள்ளது. புலங்களின் மேற்பரப்பில் காணப்படும் மண், சிதைந்த பாறைகளை (Weathered Rock), தொடர்ந்து சார்னகைட் (Charnockite) எனப்படும் கடின பாறைகள் (Hard rock) உள்ளது அருகில் உள்ள குவாரியில் ஆய்வு செய்ததில் தெரியவருகிறது. கடின பாறைகளில் காணப்படும் வேறுபட்ட நிறங்கள் (Different in colours), இணைப்புகள் (Joints), பிளவுகள், கிரல்கள் (Cracks) வெடிப்புகள் மற்றும் மாறுபட்ட அளவு கொண்ட கனிமங்கள் காரணமாக இப்பாறைகளில் மெருகேற்றக் கூடிய வண்ண கற்களை (Polished Granite / Blocks) உற்பத்தி செய்ய இயலாது. இவ்வகை பாறைகளில் இருந்து கட்டிடப்பணிகள் மற்றும் சாலை / இரயில்வே பணிகளுக்கு தேவைப்படும் கற்கள், ஜல்லிகள் மற்றும் எம்-சாண்ட் ஆகியவற்றை உற்பத்தி செய்ய இயலும் எனவும்,

விண்ணப்பிக்கப்பட்ட புலங்களை சுற்றிலும் 300 மீட்டர் சுற்றளவில், பள்ளிகள், கோயில்கள், மசூதிகள், சுடுகாடு ஏதும் இல்லை. 50 மீட்டர் சுற்றளவில் தேசிய / மாநில

நெடுஞ்சாலைகள், ஆறுகள் இல்லை. உயர்வகை மாங்கள் வனத்துறையால் பாதுகாக்கப்பட்ட பகுதியாக அறிவிக்கப்பட்ட சரணாலயங்கள், குடிய பூங்காக்கள் சுற்றுச்சூழல் உணர் திறன் மிக்க பகுதிகள் (ECO-SENSITIVE ZONE) கி.மீட்டர் சுற்றளவில் காடுகள், 500 மீட்டர் சுற்றளவில் அருங்காட்சியக துறையின் மூலம் பாதுகாக்கப்பட்ட பகுதிகளாக அறிவிக்கப்பட்ட இடங்கள் மற்றும் வரலாற்று சின்னங்கள் எதும் இல்லை எனவும்,

குவாரி அமையப்பெறவுள்ள கூட்டுப்புலத்திற்கு கிழக்கே புல எண்:624-ல் தீர்வை ஏற்படாத தரி நிலத்தின் மேல் ஓரத்தில் சில்லோடை (ம) முடிவடைந்த அரசு குவாரி உள்ளது. மேலும், வடபுறம் சுமார் 200 மீ சுற்றளவில் அமைந்துள்ள புல எண்கள். 586/11, 12, 13, 14, 15, 17,18 ஆகியவற்றில் திரு.சண்முகவேல் என்பவரின் முடிவடைந்த குவாரியும், வடகிழக்கில் அமைந்துள்ள புல எண்கள் 574, 559, 558/1, 2, 557/1, 2 ஆகியவற்றில் திரு.ராஜமோகன் என்பவருக்குச் சொந்தமான செயல்படும் குவாரி ஒன்றும், தென்கிழக்கில் சுமார் 420 மீ-க்கு அப்பால் அமைந்துள்ள புல எண்கள். 567/2A 568/1B ஆகியவற்றில் திரு.ஆறுமுகம் என்பவருக்குச் சொந்தமான செயல்படும் கல்குவாரியும், தென்மேற்கில் சுமார் 200 மீட்டர் தொலைவில் அமைந்துள்ள புல எண்கள் 635/4 மற்றும் 636 ஆகியவற்றில் திரு.முருகேசன் என்பவரது செயல்படும் கல்குவாரியும் அமைந்துள்ளது. குவாரி குத்தகை உரிமம் கோரும் கூட்டுப்புலத்தில் புல எண்கள். 623/2B, 623/2C ஆகியவற்றில் சென்ற விவசாய மின் இணைப்பு கம்பிகள், மின்கம்பங்கள், மின்வாரிய துறையின்மூலம் அகற்றப்பட்டுவிட்டது எனவும்,

எனவே, விண்ணப்பதாரர் திரு.பாஸ்கரன் மகன் திரு.கபில்தேவ் என்பவரின் கோரிக்கையினை ஏற்று விருதுநகர் மாவட்டம் வெம்பக்கோட்டை வட்டம் , கோபாலபுரம் கிராமம் பட்டா எண்: 2440 மற்றும் 2450-ல் புலஎண்கள்- 623/1C (0.1.00), 623/1D (0.3.00), 623/1G (0.3.00), 623/2A (0.1.50), 623/2B (0.42.00), 623/2C (0.46.50), 623/1A (0.18.00), 623/1B (0.17.50), 623/1E (0.28.50) 0 623/1F (0.29.50) மொத்த விஸ்தீரணம் 1.90.50 ஹெக்டேர் பரப்பு நிலங்களில் ஐந்து (5) வருடங்களுக்கு உடைகல் மற்றும் கிராவல் குவாரி குத்தகை உரிமம் தமிழ்நாடு சிறுகனிம சலுகை விதிகள் விதிஎண்.19 மற்றும் 20-ன் படி பின்வரும் நிபந்தனைகளுக்குட்பட்டு வழங்க பரிந்துரை செய்துள்ளார்.

நிபந்தனைகள்:

1. அருகிலுள்ள பட்டா நிலங்களுக்கு 7.5 மீ பாதுகாப்பு இடைவெளி விடுத்து குவாரி செய்தல் வேண்டும்.
2. புல எண்: 611 வண்டிப்பாதை மற்றும் புல எண்: 623 கிழக்கே உள்ள ஓடை உள்ளது. எனவே வண்டிப்பாதை மற்றும் ஓடைக்கு உரிய பாதுகாப்பு இடைவெளி விடுத்து குவாரி செய்தல் வேண்டும்.



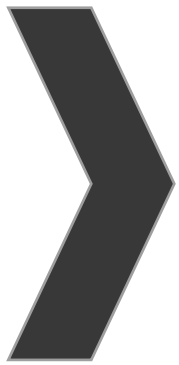
3. பொதுமக்கள் / விவசாய நிலங்களுக்கு பாதிப்பு ஏற்படாத வகையில் தகுதி வாய்ந்த அங்கீகரிக்கப்பட்ட நபர்கள் மூலம் வெடிமருந்துகள் சேமிக்கப்பட்டு குவாரியில் வெடித்தல் வேண்டும். குவாரியில் குறைந்த சக்தி கொண்ட வெடி மருந்துகளை பயன்படுத்தல் வேண்டும்.
4. சுரங்கத்திட்டம் மற்றும் சுற்றுச்சூழல் தடையில்லாச் சான்று குத்தகை உரிமம் வழங்குவதற்கு முன் சமர்ப்பிக்க வேண்டும்.
5. குவாரியில் வேலை செய்யும் தொழிலாளர்கள் தொழிலாளர் நலவாரியம்³ மற்றும் காப்பீடு திட்டத்தில் பதிவு செய்து தொழிலாளர் நலன் பேண்பட வேண்டும்.
6. குழந்தை தொழிலாளர்களை குவாரி பணியில் அமர்த்தக் கூடாது.
7. கனிமங்களை வாகனங்களில் கொண்டு செல்லும் போது பாதசாரிகள், பொது மக்கள் மற்றும் பிற வாகனங்கள் பாதிக்காதவண்ணம் தார்பாப்புகள் கொண்டு மூடி எடுத்துச் செல்ல வேண்டும்.

எனவே, துறை அலுவலர்களின் பரிந்துரையினை ஏற்றும் நிபந்தனைகளுக்கு உட்பட்டும், விருதுநகர் மாவட்டம் வெம்பக்கோட்டை வட்டம், கோபாலபுரம் கிராமம் பட்டா எண்: 2440 மற்றும் 2450-ல் புலனள்கள்- 623/1C (0.1.00), 623/1D (0.3.00), 623/1G (0.3.00), 623/2A (0.1.50), 623/2B (0.42.00), 623/2C (0.46.50), 623/1A (0.18.00), 623/1B (0.17.50), 623/1E (0.28.50) 0 623/1F (0.29.50) மொத்த விஸ்தீரணம் 1.90.50 ஹெக்டேர் பரப்பு நிலங்களில் பத்து வருடங்களுக்கு உடைகல் மற்றும் கிராவல் குவாரி உரிமம் 1959 -ம் வருடத்திய தமிழ்நாடு சிறுகனிம சலுகை விதிகள் விதி எண்: 19 (1) மற்றும் 20 -ன் படி வழங்க தகுதி வாய்ந்த நிலப்பரப்பாக (Precise Area) கருதப்படுகிறது.

எனவே, தமிழ்நாடு சிறுகனிம சலுகை விதிகள்-1959 விதி எண்:41-ன்படி குவாரி பணி மேற்கொள்வது தொடர்பாக வரைவு சுரங்கத் திட்டத்தினை (Mining Plan) 90 தினங்களுக்குள்ளும் விதி எண்:42-ன்படி மாநில அளவிலான சுற்றுச்சூழல் தாக்க மதிப்பீட்டு ஆணையத்தின் (State Level Environmental Impact Assessment Authority) இசைவினைப் பெற்று சமர்ப்பிக்குமாறும் மனுதாரர் திரு.பாஸ்கரன் மகன் திரு. திரு.கபில்தேவ் என்பவர் கேட்டுக் கொள்ளப்படுகிறார்.

உதவி இயக்குநர்,
புவியியல் மற்றும் சுரங்கத்துறை,
விருதுநகர்.

பெறுநர்
திரு.கபில்தேவ் த/பெ பாஸ்கரன்,
125/2 டீச்சர்ஷ் காலனி,
கே.ஆர் நகர் (post),
புதுப்பாளையம்,
இராஜபாளையம் வட்டம்
விருதுநகர் மாவட்டம்.



ANNEXURE-3

From

Dr.S.Suhatharahima, M.Sc.,Ph.D.,
Assistant Director,
Geology and Mining,
Virudhunagar.

To

Thiru.B.Kabildev,
S/o. Baskaran,
No.125/2, Teachers Colony,
K.R Nagar (Post),
Puthupalayam,
Rajapalayam Taluk,
Virudhunagar District

Roc. No: KV1/1216/2024, Dated:09.06.2025

Sir,

Sub: Mines and Minerals - Minor Mineral -
Virudhunagar District - Vembakottai Taluk -
Gopalapuram Village - Patta Land - S.F.Nos:
623/1C, 623/1D, 623/1G, 623/2A, 623/2B,
623/2C, 623/1A, 623/1B, 623/1E and 623/1F
Extent 1.90.50 Hectares - Quarry lease application
preferred by Thiru. B.Kabildev, S/o Baskaran, for
quarrying Rough Stone and Gravel -Details of
quarries in 500 meter radius - Regarding.

- Ref:**
1. Quarry lease application received from Thiru. B.Kabildev dated: 05.11.2024.
 2. The Assistant Director, Geology and Mining, Virudhunagar Rc.No.KV1/1216/2024, Dated: 16.05.2025.
 3. Thiru. B.Kabildev, S/o Baskaran letter, dated: 20.05.2025.

Thiru. B.Kabildev, S/o Baskaran, has preferred an application for the grant of quarrying lease to quarry Rough Stone and Gravel over an extent of 1.90.50 Hectares of Patta Land in S.F.Nos: 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk & Virudhunagar District for a period of 10 (Ten) Years Under Rule 19 of Tamil Nadu Minor Mineral Concession Rules 1959.

2) The application was examined and consented to grant lease to quarrying Rough Stone and Gravel over an extent of 1.90.50 Hectares of Patta Land in S.F.No: 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F for a period of 10 (Ten) years subject to produce Mining Plan for approval and to obtain Environment Clearance from SEIAA in the reference 2nd cited.

3) The applicant has submitted the Mining Plan, prepared as per the guidelines issued by the Commissioner of Geology and Mining and as per the Rules and Acts. The Geological reserves, Mineable reserves and yearwise production are discussed in Table 1, 2, 3 & 4 of the mining plan. The Geological reserves is estimated as 20,94,400 MT Roughstone and 1,90,400 MT of Gravel. The mineable reserves is estimated as 6,72,210 MTs Roughstone and 1,45,860 MTs of Gravel upto a depth of 45 m below ground level for the period of Ten years.

The yearwise production of roughstone and gravel are furnished in the mining plan as detailed below.

yearwise production for 1st to 5th year is given below

Table No-3

Year	Section	Bench	Length in (m)	Width in (m)	Depth in (m)	Gravel in m ³	Mineable Reserves in m ³	Bulk Density	Gravel in (Ts)	Mineable Reserves in (Ts)
I	XY-AB	I	38	102	5	19380	-	2.00	38760	-
		II	33	92	5	-	15180	2.75	-	41745.00
		III	28	82	5	-	11480	2.75	-	31570.00
		IV	23	72	5	-	8280	2.75	-	22770.00
		V	18	62	5	-	5580	2.75	-	15345.00
Total						19380	40520	-	38760	111430.00
II	XY-AB	I	27	102	5	13770	-	2.00	27540	-
		II	27	92	5	-	12420	2.75	-	34155.00
		III	27	82	5	-	11070	2.75	-	30442.50
		IV	27	72	5	-	9720	2.75	-	26730.00
		V	27	62	5	-	8370	2.75	-	23017.50
Total						13770	41580	-	27540	114345.00
III	XY-AB	I	27	102	5	13770	-	2.00	27540	-
		II	27	92	5	-	12420	2.75	-	34155.00
		III	27	82	5	-	11070	2.75	-	30442.50
		IV	27	72	5	-	9720	2.75	-	26730.00
		V	27	62	5	-	8370	2.75	-	23017.50
Total						13770	41580	-	27540	114345.00
IV	XY-AB	I	30	102	5	15300	-	2.00	30600	-
		II	30	92	5	-	13800	2.75	-	37950.00
		III	25	82	5	-	10250	2.75	-	28187.50
		IV	20	72	5	-	7200	2.75	-	19800.00
		V	15	62	5	-	4650	2.75	-	12787.50
		VI	23	52	5	-	5980	2.75	-	16445.00
Total						15300	41880	-	30600	115170.00
V	XY-AB	I	21	102	5	10710	-	2.00	21420	-
		VI	54	52	5	-	14040	2.75	-	38610.00
		VII	67	42	5	-	14070	2.75	-	38692.50
		VIII	57	32	5	-	9120	2.75	-	25080.00
		IX	47	22	5	-	5170	2.75	-	14217.50
Total						10710	42400	-	21420	116600.00
Grand Total						72930	207960	-	145860	571890.00

**The proposed tentative yearwise production for
6th to 10th year is given below**

Table No-4

Year	Section	Bench	Length in (m)	Width in (m)	Depth in (m)	Mineable Reserves in m³	Bulk Density	Mineable Reserves in (Ts)
VI	XY-AB	II	16	92	5	7360	2.75	20240
Total						7360	-	20240
VII	XY-AB	III	16	82	5	6560	2.75	18040
Total						6560	-	18040
VIII	XY-AB	IV	16	72	5	5760	2.75	15840
		V	10	62	5	3100	2.75	8525
Total						8860	-	24365
IX	XY-AB	V	6	62	5	1860	2.75	5115
		VI	16	52	5	4160	2.75	11440
		VII	8	42	5	1680	2.75	4620
Total						7700	-	21175
X	XY-AB	VII	8	42	5	1680	2.75	4620
		VIII	16	32	5	2560	2.75	7040
		IX	16	22	5	1760	2.75	4840
Total						6000	-	16500
Grand Total						36480	-	100320

The applicant has proposed to carry out 5,71,890Ts of Rough stone and 1,45,860Ts of Gravel formation upto a depth of 45m (below ground level) for the period of first five years and remaining quantity of 1,00,320Ts of Rough Stone will be proposed for the period of second five years.

The Environmental Management Plan and Mine Closure plan are discussed in Part - B (10) and all conditions have been incorporated in the Mining Plan as laid down by the authorities.

4) In view of the above, in exercise of the powers delegated under Rule 41 of Tamil Nadu Minor Mineral Concession Rules, 1959, I hereby approve the Mining Plan submitted by by Thiru. B.Kabildev S/O Baskaran, for quarrying Rough Stone and Gravel over an extent of 1.90.50 Hectares of Patta Land in S.F.Nos: 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk &

Virudhunagar District for a period of 10 (Ten) to obtain Environment Clearance from SEIAA, Chennai subject to the following conditions:

1. The Mining Plan is approved without prejudice to any other law applicable to the quarry permission from time to time where such Laws are made by the State Government or any other authority.
2. This approval of the Mining Plan does not in any way imply the approval of the Government in terms of any other provisions of the Tamil Nadu Minor Mineral Concession Rules, 1959.
3. The Mining Plan is approved without prejudice to any other order or direction from any court of competent jurisdiction.
4. The approval of the Mining Plan does not in any way imply the approval of the Government in terms of any other provisions of the Mines and Minerals (Development and Regulation) Amendment Act, 2015 or any other connected Laws including, Environment Protection.
5. Act, 1986, and the Rules made there under in Tamil Nadu Minor Mineral Concession Rules, 1959.

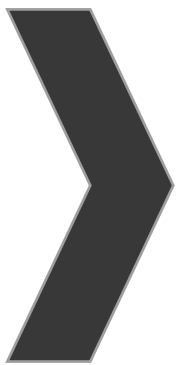
Encl: Two copies of Mining Plan.



Assistant Director,
Geology and Mining,
Virudhunagar.

Copy to:

The Member Secretary,
State Level Environmental Impact
Assessment Authority,
State Expert Appraisal Committee
at SEAC Conference Hall 9th Floor,
Metros (CMRL building),
Nandanam,
Chennai-600035.



APPROVAL MINING PLAN

MINING PLAN FOR GOPALAPURAM ROUGH STONE & GRAVEL QUARRY



(Prepared under rule 19(1), 41 & 42 of Tamil Nadu Minor Mineral Concession Rules, 1959)

LOCATION OF THE QUARRY LEASE APPLIED AREA

STATE : TAMIL NADU
DISTRICT : VIRUDHUNAGAR
TALUK : VEMBAKOTTAI
VILLAGE : GOPALAPURAM
S.F.NOS : 623/1C, 623/1D, 623/1G, 623/2A,
623/2B, 623/2C, 623/1A, 623/1B,
623/1E AND 623/1F

EXTENT : 1.90.50Ha

FOR APPLICANT

Thiru.B.Kabildev,
S/o. Baskaran,
No.125/2, Teachers Colony,
K.R Nagar (Post), Puthupalayam,
Rajapalayam Taluk, Virudhunagar District.

ECO-FRIENDLY



SUSTAINABILITY



SAFETY



(PPE)

PREPARED BY

C.Natarajan, M.Sc.,M.Phil.,
Qualified Person

M/s. GLOBAL MINING SOLUTIONS

(NABET ACCREDITED & ISO 9001 CERTIFIED CONSULTANT)

PLOT NO. 6, SF NO. 13/2, A2, VS CITY, RC CHETTYPATY,
KOTTAMETTUPATY,

OMALUR, SALEM, TAMIL NADU – 636 455

NABET ACCREDITATION NO – NABET/EIA/2326/IA 0110

CONTACT: 97502 23535, 94446 54520

Email: infoglobalmining@gmail.com, globalminingsolutionssalem@gmail.com



B.Kabildev,
S/o. Baskaran,
No.125/2, Teachers Colony,
K.R Nagar (Post), Puthupalayam,
Rajapalayam Taluk, Virudhunagar District.



CONSENT LETTER FROM THE APPLICANT

The Mining Plan in respect of **Rough Stone and Gravel** quarry over an extent of 1.90.50hectares of Patta lands in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State has been prepared by

C.Natarajan, M.Sc.,M.Phil.,

Qualified Person

I request the Assistant Director, Department of Geology and Mining, Virudhunagar District to make further correspondence regarding modifications of the Mining Plan with the said Qualified Person on this following address.

C.Natarajan, M.Sc.,M.Phil.,

Qualified Person

M/s. GLOBAL MINING SOLUTIONS

(NABET ACCREDITED & ISO 9001 CERTIFIED CONSULTANT)

PLOT No. 6, SF No. 13/2, A2, Vs City, RC Chettypatty,

Kottamettupatty, Omalur, Salem, Tamil Nadu – 636 455

NABET ACCREDITATION NO – NABET/EIA/2326/IA 0110

CONTACT: 97502 23535, 94446 54520

I hereby undertake that all modifications so made in the Mining Plan by the Qualified Person may be deemed to have been made with my knowledge and consent and shall be acceptable to me and building on me in all respects.

Signature of the Applicant

B.Kabildev

Place: Virudhunagar

Date: 17.05.2025

Kap Dev-B

Date: 17.05.2025



C.Natarajan, M.Sc.,M.Phil.,

Qualified Person

M/s. GLOBAL MINING SOLUTIONS

(NABET ACCREDITED & ISO 9001 CERTIFIED CONSULTANT)

PLOT No. 6, SF No. 13/2, A2, Vs City, RC Chettypatty,

Kottamettupatty, Omalur, Salem, Tamil Nadu – 636 455

NABET ACCREDITATION NO – NABET/EIA/2326/IA 0110

CONTACT: 97502 23535, 94446 54520

CERTIFICATE

This is to certify that, the provisions of under rules 41 & 42 as Amended in under Tamil Nadu Minor Mineral Concession Rules, 1959, have been observed in the Mining Plan for the grant of **Rough Stone and Gravel** quarry lease over an extent of 1.90.50hectares of Patta lands in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State applied by Thiru.B.Kabildev, for fresh quarry lease.

Wherever specific permission / exemptions / relaxations or approvals are required, the applicant will approach the concerned authorities of State and Central Governments for granting such permissions etc.

Certified

Signature of Qualified Person.


C.Natarajan, M.Sc.,M.Phil.,

Qualified Person

C.NATARAJAN M.Sc.,M.Phil.,

Qualified Person

Place: Salem

Date: 19.05.2025

C.Natarajan, M.Sc.,M.Phil.,

Qualified Person

M/s. GLOBAL MINING SOLUTIONS

(NABET ACCREDITED & ISO 9001 CERTIFIED CONSULTANT)

PLOT No. 6, SF No. 13/2, A2, Vs City, RC Chettyatty,

Kottamettupatty, Omalur, Salem, Tamil Nadu - 636 455

NABET ACCREDITATION NO - NABET/EIA/2326/IA 0110

CONTACT: 97502 23535, 94446 54520



CERTIFICATE

Certified that, in preparation of Mining Plan for **Rough Stone and Gravel** quarry over an extent of 1.90.50hectares of Patta lands in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State for Thiru.B.Kabildev, covers all the provisions of Mines Act, Rules, and Regulations etc made there under and whenever specific permission are required, the applicant will approach the Director General of Mines Safety, Chennai. The standards prescribed by DGMS in respect of Mines Health will be strictly implemented.

Certified

Signature of Qualified Person.

C.Natarajan, M.Sc.,M.Phil.,

Qualified Person

C.NATARAJAN M.Sc.,M.Phil.,

Qualified Person

Place : Salem

Date : 19.05.2025

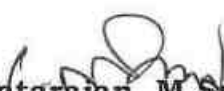


CERTIFICATE

Certified that I, C.Natarajan, M/s. GLOBAL MINING SOLUTIONS (NABET ACCREDITED & ISO 9001 CERTIFIED CONSULTANT) Plot No. 6, SF No. 13/2, A2, Vs City, RC Chettypatty, Kottamettupatty, Omalur, Salem, Tamil Nadu - 636 455 NABET ACCREDITATION NO - NABET/EIA/2326/IA 0110. I am a Post graduate in Geology (M.Sc., Geology) from Annamalai university and more than five years of experience in mining Field.

Rule 15(1)(a) and (b) of Minerals (Other than Atomic, Hydro Carbons Energy Minerals) concession Rules 2016 stipulates the eligibility for preparing Mining Plans as *"(1)(a) a post graduate degree in Geology granted by a university established" and (1)(b) "Professional experience of five years of working in a supervisory capacity in the field of mining after obtaining the degree"*. Since my qualification and experience are satisfied the Rule (1)(a) and (1)(b) of 15 of the Said Rules, I am eligible to prepare Mining Plans for both Major and Minor Minerals.

Accordingly I prepared this Mining Plan in respect of Rough Stone and Gravel quarry lease applied for an extent of 1.90.50hectares of Patta lands in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, by Thiru.B.Kabildev, for a period of Ten Years. Since the Mining Plan is prepared as per the provisions contained in Rule 15(1) (a) and (b) of Minerals (Other than Atomic, Hydro Carbons Energy Minerals) concession Rules 2016, the same may be approved by the Competent Authority.


C.Natarajan, M.Sc.,M.Phil.,

Qualified Person

C.NATARAJAN M.Sc.,M.Phil.,

Qualified Person

Place : Salem

Date : 19.05.2025

CONTENTS



S. No.	Description	Page No.
1.0	Introduction	1
2.0	General Information	5
3.0	Location	6
4.0	Geology and Mineral Reserves	8
5.0	Mining	12
6.0	Blasting	16
7.0	Mine Drainage	17
8.0	Other Permanent Structures	18
9.0	Employment Potentials & Welfare Measures	19
10.0	Environment Management Plan	21
11.0	Mine Closure Plan	24
12.0	Any Other Details Intend to furnish by the Applicant	25



MINING PLAN FOR MINOR MINERALS

ROUGH STONE AND GRAVEL

Over an extent of 1.90.50 hectares of Patta land in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.

(PREPARED UNDER RULE 19(1), 41 and 42 OF TNMMCR 1959)

1.0 Introduction and Executive Summary:

1. The present Mining Plan is prepared for Thiru.B.Kabildev, S/o. Baskaran, residing at No.125/2, Teachers Colony, K.R Nagar (Post), Puthupalayam, Rajapalayam Taluk, Virudhunagar District.
2. The application was processed by the Assistant Director, Department of Geology and Mining, Virudhunagar, and passed an order vide Rc.No.KV1/1216/2024 dated 16.05.2025 directing the applicant to produce approved Mining Plan under Rule 41(5) of the Tamil Nadu Minor Mineral Concession Rules, 1959 and Environmental Clearance Certificate under Rule 42 from the State Level Environmental Impact Assessment Authority (SEIAA) for the grant of quarry lease to quarry Rough Stone and Gravel over an extent of 1.90.50 hectares of Patta lands in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District of Tamil Nadu State for a period of ten years.
3. Accordingly, Mining Plan is prepared under the provisions of rule 19(1), 41 and 42 as per the amendments under Tamil Nadu Minor Mineral Concession Rules, 1959 by incorporating following the conditions imposed in the precise area communication letter.
 - i) A 7.5 meters of safety distance should be left out for the adjacent patta lands while quarrying operation.
 - ii) A 10-meter safety distance should be left out for cart track passing on north side situated in S.F.No.611 and A 10-meter safety distance should be left out for Nilavial odai passing on the east side of the lease applied area S.F.No. 623, while quarrying operations.



- iii) The applicant should be appoint qualified Blaster, during blasting using mild explosive to avoid hindrance to public and adjacent agricultural lands.
 - iv) The Draft Mining Plan and Environmental clearance should be submit before the grant of quarry lease.
 - v) All the labours should be registered with the labour welfare Board of Government of Tamil Nadu and to be enrolled in the group insurance Scheme.
 - vi) Applicant should not engage child labour during quarry work.
 - vii) The minerals should be covered with Tarpaulin during transportation without any hindrance to Transpellers and public.
4. Geological Resources is estimated at 20,94,400Ts of Rough stone and 1,90,400Ts of gravel Mineable Reserves is estimated at 6,72,210Ts of Rough Stone and 1,45,860Ts of gravel after leaving necessary safety distance from the lease boundary as indicated in the precise area letter and relevant mining laws in force.
 5. The production schedule is proposed production of 5,71,890Ts of Rough Stone and 1,45,860Ts of gravel for the period of first five years upto a depth of 45m below ground level and remaining quantity of 1,00,320Ts of Rough Stone will be proposed for the period of second five years.
 6. The applicant ensured that, child labours under 18 years of age will not be engaged for quarrying operation.
 7. The applicant ensure that will appoint should have valid certified persons (Mines Manager, Foreman, Mate) during quarrying operation.
 8. Environmental parameters,
 - i) The area does not attract the Forest Conservation Act, 1980 as there is no forest around 10km radius.
 - ii) There is no interstate boundary around 10Kms radius.
 - iii) There is no wild life animal sanctuary within 1.5Kms radius from the project site area under the Wildlife (Protection) Act, 1972.

Therefore the project seeks clearance only from State Level Environmental Impact Assessment Authority (SEIAA).



9. Environmental measures to be adopted shall be,

- i) Dust Control at source while drilling and blasting,
- ii) Dust suppression at loading point and transport haul roads,
- iii) Noise Control in blasting, control of fly rock missiles and vibration by doing peak particle velocity with in standard as prescribed by the DGMS and MOEF.
- iv) Unnecessary land degradation should be avoided or damaged land should be reclaimed or rehabilitated.
- v) Avoid uneven rat hole mining and follow scientific and systematic mining by safe bench system of open cast mining.
- vi) Mining near major fracture zones if any should be avoided to control ground water fluctuation in the adjacent agricultural lands.
- vii) Emission test of vehicles should be in tack to maintain minimum emission level of flue gases.
- viii) Noise level should not exceed 80db and the vehicles should use only permitted Air Horn while on road near residential areas.
- ix) Safety zones as prescribed by the Department of Geology and Mining from adjacent infrastructures should be strictly adhere to.
- x) And any other conditions as stipulated by the concerned authorities should be followed to protect the environment.



EXECUTIVE SUMMARY:

a.	Name of the Village Panchayat	:	Gopalapuram																																										
b.	Name of the Panchayat Union	:	Vembakottai																																										
c.	The proposed total Minable Reserves	:	6,72,210Ts of Rough Stone, 1,45,860Ts of gravel formation																																										
d.	The proposed quantity of reserves (level of production) for Five years to be mined is(Recoverable reserves)	:	5,71,890Ts of Rough Stone, 1,45,860Ts of gravel formation																																										
e.	Total extent of the area	:	1.90.50Ha																																										
f.	Proposed Period of mining	:	Five Years																																										
g.	Existing depth	:	It is fresh quarry lease applied area																																										
h.	Proposed Depth of mining	:	45m (below ground level) for the proposed mining plan.																																										
i.	Method of mining/level of mechanization	:	Opencast, Semi-mechanized Mining with a bench height of 5m and bench width of 5m is proposed.																																										
j.	Types of Machineries used in the quarry	:	Machineries like Tractor mounted compressor attached with Jack hammers, Excavators are proposed to deploy for quarrying operation.																																										
k.	Cost of the Project A. Fixed Assets Cost B. Operational Cost C. EMP Cost	:	Rs. 14,43,000 /- Rs. 81,50,000/- Rs. 5,50,000/- Total Project cost(A+B+C)= Rs.1,01,43,000 /-																																										
l.	The area applied for lease is bounded by nine corners and the coordinates are clearly marked in plate no II.																																												
	<table border="1"> <thead> <tr> <th rowspan="2">Corners</th><th colspan="2">Co- ordinates</th><th rowspan="2">Distance between the corners</th></tr> <tr> <th>Latitude</th><th>Longitude</th></tr> </thead> <tbody> <tr> <td>1</td><td>09° 21' 13.79"N</td><td>77° 36' 36.59"E</td><td>1-2 = 60.4m</td></tr> <tr> <td>2</td><td>09° 21' 15.75"N</td><td>77° 36' 36.70"E</td><td>2-3 = 68.2m</td></tr> <tr> <td>3</td><td>09° 21' 17.96"N</td><td>77° 36' 36.97"E</td><td>3-4 = 157.4m</td></tr> <tr> <td>4</td><td>09° 21' 16.60"N</td><td>77° 36' 41.94"E</td><td>4-5 = 11.2m</td></tr> <tr> <td>5</td><td>09° 21' 16.27"N</td><td>77° 36' 42.09"E</td><td>5-6 = 24.0m</td></tr> <tr> <td>6</td><td>09° 21' 15.49"N</td><td>77° 36' 41.99"E</td><td>6-7 = 27.8m</td></tr> <tr> <td>7</td><td>09° 21' 14.65"N</td><td>77° 36' 41.65"E</td><td>7-8 = 54.4m</td></tr> <tr> <td>8</td><td>09° 21' 12.93"N</td><td>77° 36' 42.04"E</td><td>8-9 = 68.0m</td></tr> <tr> <td>9</td><td>09° 21' 13.31"N</td><td>77° 36' 39.85"E</td><td>9-1 = 100.6m</td></tr> </tbody> </table>			Corners	Co- ordinates		Distance between the corners	Latitude	Longitude	1	09° 21' 13.79"N	77° 36' 36.59"E	1-2 = 60.4m	2	09° 21' 15.75"N	77° 36' 36.70"E	2-3 = 68.2m	3	09° 21' 17.96"N	77° 36' 36.97"E	3-4 = 157.4m	4	09° 21' 16.60"N	77° 36' 41.94"E	4-5 = 11.2m	5	09° 21' 16.27"N	77° 36' 42.09"E	5-6 = 24.0m	6	09° 21' 15.49"N	77° 36' 41.99"E	6-7 = 27.8m	7	09° 21' 14.65"N	77° 36' 41.65"E	7-8 = 54.4m	8	09° 21' 12.93"N	77° 36' 42.04"E	8-9 = 68.0m	9	09° 21' 13.31"N	77° 36' 39.85"E	9-1 = 100.6m
Corners	Co- ordinates		Distance between the corners																																										
	Latitude	Longitude																																											
1	09° 21' 13.79"N	77° 36' 36.59"E	1-2 = 60.4m																																										
2	09° 21' 15.75"N	77° 36' 36.70"E	2-3 = 68.2m																																										
3	09° 21' 17.96"N	77° 36' 36.97"E	3-4 = 157.4m																																										
4	09° 21' 16.60"N	77° 36' 41.94"E	4-5 = 11.2m																																										
5	09° 21' 16.27"N	77° 36' 42.09"E	5-6 = 24.0m																																										
6	09° 21' 15.49"N	77° 36' 41.99"E	6-7 = 27.8m																																										
7	09° 21' 14.65"N	77° 36' 41.65"E	7-8 = 54.4m																																										
8	09° 21' 12.93"N	77° 36' 42.04"E	8-9 = 68.0m																																										
9	09° 21' 13.31"N	77° 36' 39.85"E	9-1 = 100.6m																																										



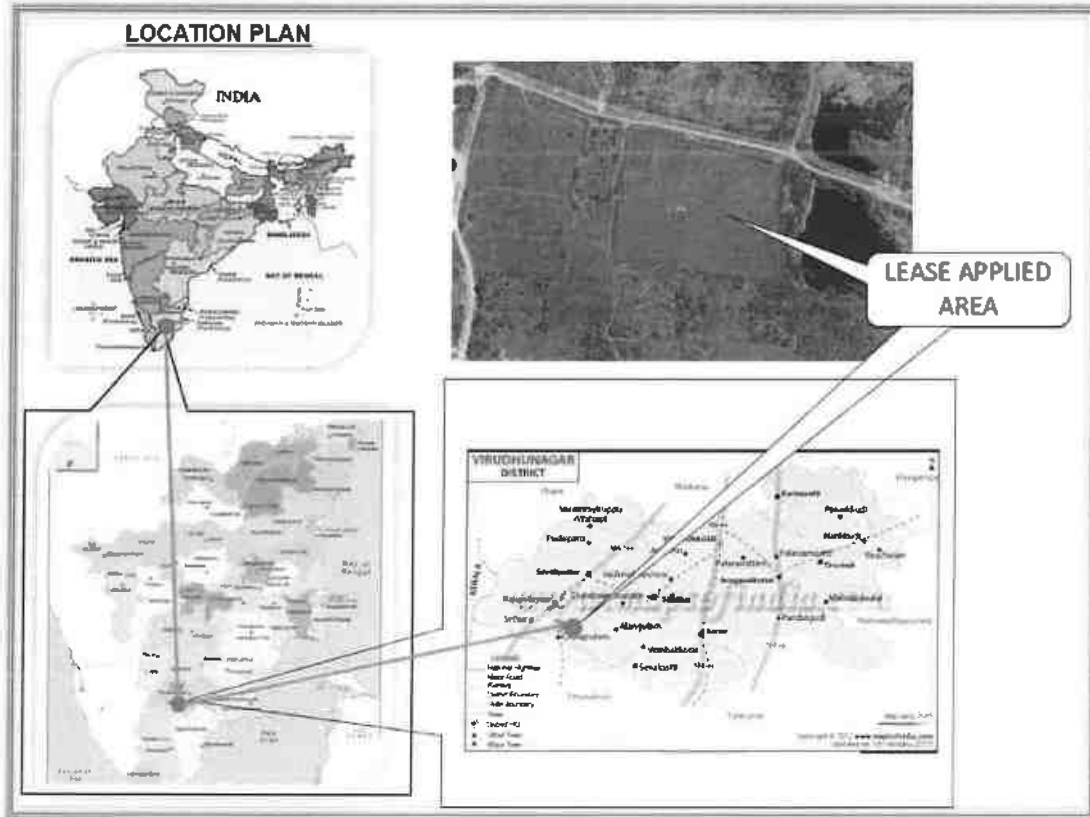
2.0 General Information:

2.1	a.	Name of the Applicant	: Thiru.B.Kabildev,
	b.	Address of the Applicant with phone No and e-mail id if any	: S/o. Baskaran, No.125/2, Teachers Colony, K.R Nagar (Post), Puthupalayam, Rajapalayam Taluk, Virudhunagar District. Pin Code- 626108 Cell No.:9787569896
	c.	Status of the Applicant	: Individual
2.2	a.	Mineral Which the applicant intends to mine	: Rough Stone and Gravel.
	b.	Precise area communication letter No.	: Precise area communication letter received from the Assistant Director, Department of Geology and Mining, Virudhunagar, vide Rc.No.KV1/1216/2024 dated 16.05.2025.
	c.	Period of permission / lease granted	: The Assistant Director, Department of Geology and Mining, Virudhunagar, has grant of lease period for ten years .
	d.	Name and Address of the QP preparing Mining Plan	: C.Natarajan, M.Sc.,M.Phil., Qualified Person M/s. GLOBAL MINING SOLUTIONS (NABET ACCREDITED & ISO 9001 CERTIFIED CONSULTANT) PLOT No. b, SF No. 13/2, A2, Vs City, RC Chettypatty, Kottamettupatty, Omalur, Salem, Tamil Nadu - 636 455 NABET ACCREDITATION NO - NABET/EIA/2326/IA 0110 Contact: 97502 23535, 94446 54520.



3.0 Location:

S.No	Details of the Area:	
1	Corner Coordinates	Latitude :09°21'12.93"N to 09°21'17.96"N Longitude :77°36'36.59"E to 77°36'42.09"E
2	Toposheet Number	58- G/11
3	The altitude of the area	137m (MSL)
4	Extent	1.90.50Ha
5	Survey Nos	623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F
6	Village	Gopalapuram
7	Taluk	Vembakottai
8	District	Virudhunagar
9	State	Tamil Nadu





a.	Classification of the Area (Ryotwari / poramboke / others)	:	Patta land
b.	Ownership / Occupancy of the Applied area (Surface rights)	:	It is patta land registered in the name of applicant vide patta no. 2440 and 2450, Please refer Annexure No: IV.
c.	Toposheet No. with Latitude and Longitude	:	Topo Sheet No: 58-G/11 Latitude :09°21'12.93"N to 09°21'17.96"N Longitude :77°36'36.59"E to 77°36'42.09"E
d.	Existence of Public Road / Railway line if any nearby the area and approximate distance	:	There is an existing road from the area leads to Kuruchiarpatti – Mettuvadakarai village road on southeast side of the area. The Nearest Railway line is Sankarankovil to Rajapalayam line which is about 4.05Km on west side of the area.

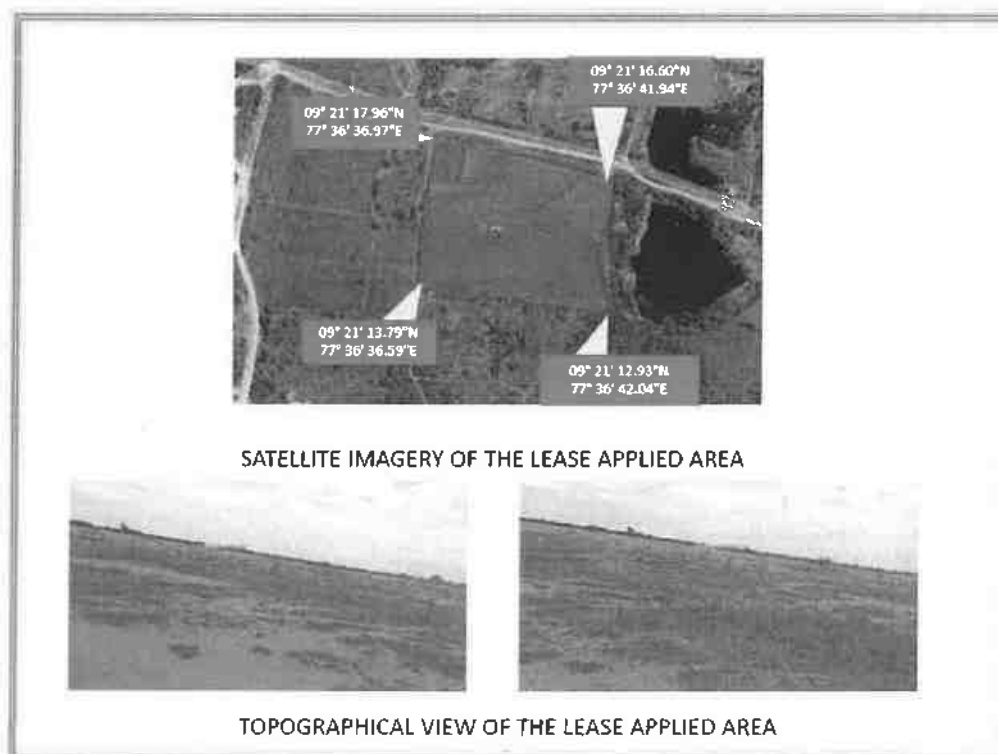


Fig. Location of the lease applied area



PART - A

4.0 Geology and Mineral Reserves:

4.1	a. Topography	➤ The area applied for quarry lease is exhibits almost plain covered by Gravel formation. The massive Charnockite formation is noticed below 5m (Avg) Gravel formation and sloping towards southeastern side of the area, the altitude of the area is above 137m (maximum) from MSL. . ➤ No major river is found nearby the lease applied area. ➤ Water table is found at a depth of 68m in summer and 65m in rainy seasons. ➤ Temperature of the area is reported to be 18°C to a maximum of 42°C during summer. ➤ Rainfall of this area is about 800mm to 900 mm during the both NE & SW monsoons.
	b. General Geology of the Area	The area is underlain by the wide range of metamorphic rocks of peninsular gneissic complex. These rocks are extensively weathered and overlain by the recent valley fills and alluvium at places. The geological formations found in the district are Archaean rocks like Gneisses, Granites, Charnockites basic granulites and calc-gneisses. The younger formations are Quartz veins and pegmatite. The rock type noticed in the area for lease is Charnockite which contains mostly Quartz and Feldspar with some ferromagnesian minerals. The Charnockite is part of peninsular Gneisses, a high grade metamorphic rock. The strike of the Charnockite formation is N45°E -S45°W with dipping towards SE 60°.



			The general geological succession of the area is given as under. <table><thead><tr><th><u>AGE</u></th><th><u>ROCK TYPE</u></th></tr></thead><tbody><tr><td>Recent</td><td>Gravelly soil Unconformity</td></tr><tr><td>Archaean</td><td>Dolerite dyke Charnockite. Peninsular Gneissic complex and Calc Gneiss</td></tr></tbody></table>	<u>AGE</u>	<u>ROCK TYPE</u>	Recent	Gravelly soil Unconformity	Archaean	Dolerite dyke Charnockite. Peninsular Gneissic complex and Calc Gneiss
<u>AGE</u>	<u>ROCK TYPE</u>								
Recent	Gravelly soil Unconformity								
Archaean	Dolerite dyke Charnockite. Peninsular Gneissic complex and Calc Gneiss								
4.2		Details of Exploration already carried out if any :	No exploration was carried out, as the Rough stone formations are clearly visible from outcrops surrounding the lease applied area.						
4.3	a.	Estimation of Reserves :	The Geological and Recoverable reserves are estimated by cross sectional method. Two sections have been drawn, one section drawn length wise as (X-Y), and another one section drawn width wise as (A-B), to cover maximum area considered for lease. The Plans and Sections have been drawn with a scale of 1:1000 and 1:500 respectively. Please refer plate No.III.						



a. Geological Resources

The quarrying is restricted up to a depth of 45m (below ground level) only, availability of resources is given below.

Table No-1

Section	Bench	Length in (m)	Width in (m)	Depth in (m)	Gravel in m3	Geological Resources in m3	Bulk Density	Gravel in Ts	Geological Resources of Rough stone in Ts
XY-AB	I	160	119	5	95200	-	2.00	190400	-
	II	160	119	5	-	95200	2.75	-	261800
	III	160	119	5	-	95200	2.75	-	261800
	IV	160	119	5	-	95200	2.75	-	261800
	V	160	119	5	-	95200	2.75	-	261800
	VI	160	119	5	-	95200	2.75	-	261800
	VII	160	119	5	-	95200	2.75	-	261800
	VIII	160	119	5	-	95200	2.75	-	261800
	IX	160	119	5	-	95200	2.75	-	261800
Total					95200	761600	-	190400	2094400

Gravel Formation

: 1,90,400Ts

The Geological Resources of Rough stone

: 20,94,400Ts

b. Mineable Reserve

The mineable reserve calculated by deducting 7.5m and 10m safety distance and bench loss.

Table No-2

Section	Bench	Length in (m)	Width in (m)	Depth in (m)	Gravel in m ³	Mineable Reserves in m ³	Bulk Density	Gravel in (Ts)	Mineable Reserves in (Ts)
XY-AB	I	143	102	5	72930	-	2.00	145860	-
	II	133	92	5	-	61180	2.75	-	168245.00
	III	123	82	5	-	50430	2.75	-	138682.50
	IV	113	72	5	-	40680	2.75	-	111870.00
	V	103	62	5	-	31930	2.75	-	87807.50
	VI	93	52	5	-	24180	2.75	-	66495.00
	VII	83	42	5	-	17430	2.75	-	47932.50
	VIII	73	32	5	-	11680	2.75	-	32120.00
	IX	63	22	5	-	6930	2.75	-	19057.50
Total					72930	244440	-	145860	672210

The mineable reserve is computed as 6,72,210Ts of Rough stone and 1,45,860Ts of Gravel formation upto a depth 45m (below ground level) only.





5.0 Mining:

5.1	Method of Mining	: 1. Opencast method of semi mechanized mining with 5.0m height 5m width of the bench. 2. However, as far as the quarrying of Rough stone is concerned, observance of the provisions of Regulation 106(2) (b) as above is seldom possible due to various inherent petrogenetic factors coupled with mining difficulties. Hence it is proposed to obtain relaxation to the provisions of the above regulation from the Director of mines safety for which necessary provision is available with the regulation 106 (2) (b) of MMR-1961, under Mine Act-1952.
5.2	Mode of Working	: The rough stone is proposed to quarry 5m bench height, 5m width with conventional opencast semi-Mechanized method. The quarry operation involves shallow jack hammer drilling, slurry blasting, excavation, Loading and transportation of Rough stone to the needy crushers/other buyers. The production of Rough stone in this quarry involves the following method which is typical for Rough Stone quarrying in contrast to other major mineral mining. Splitting of rock mass of considerable volume from the parent rock mass by jackhammer drilling and blasting, hydraulic excavators are used for loading the Rough Stone from pithead to the needy crushers/other buyers. Occasionally hydraulic excavators are attached with rock breakers for fragmentation to avoid secondary blasting. The primary boulders thus splitted are removed from the pits by excavators and further made to smaller sizes by rock breakers attached in excavators. It is a conventional opencast semi mechanized method of mining.
5.3	Proposed bench height & Width	: Quarrying of Rough Stone is proposed bench height of 5m and bench width of 5m.
5.4	Details of Overburden / Mineral Production proposed for the first 5 years.	: The overburden in the form of Gravel, after the excavation of Gravel and Rough stone will be directly loaded into tipper to the needy crushers/other buyers for road project and construction works for filling and leveling of low lying areas.



The Yearwise Production and Development Table
Table No - 3

Year	Section	Bench	Length in (m)	Width in (m)	Depth in (m)	Gravel in m ³	Mineable Reserves in m ³	Bulk Density	Gravel in (Ts)	Mineable Reserves in (Ts)
I	XY-AB	I	38	102	5	19380	-	2.00	38760	-
		II	33	92	5	-	15180	2.75	-	41745.00
		III	28	82	5	-	11480	2.75	-	31570.00
		IV	23	72	5	-	8280	2.75	-	22770.00
		V	18	62	5	-	5580	2.75	-	15345.00
Total						19380	40520	-	38760	111430.00
II	XY-AB	I	27	102	5	13770	-	2.00	27540	-
		II	27	92	5	-	12420	2.75	-	34155.00
		III	27	82	5	-	11070	2.75	-	30442.50
		IV	27	72	5	-	9720	2.75	-	26730.00
		V	27	62	5	-	8370	2.75	-	23017.50
Total						13770	41580	-	27540	114345.00
III	XY-AB	I	27	102	5	13770	-	2.00	27540	-
		II	27	92	5	-	12420	2.75	-	34155.00
		III	27	82	5	-	11070	2.75	-	30442.50
		IV	27	72	5	-	9720	2.75	-	26730.00
		V	27	62	5	-	8370	2.75	-	23017.50
Total						13770	41580	-	27540	114345.00
IV	XY-AB	I	30	102	5	15300	-	2.00	30600	-
		II	30	92	5	-	13800	2.75	-	37950.00
		III	25	82	5	-	10250	2.75	-	28187.50
		IV	20	72	5	-	7200	2.75	-	19800.00
		V	15	62	5	-	4650	2.75	-	12787.50
Total						15300	5980	2.75	30600	16445.00
V	XY-AB	I	21	102	5	10710	-	2.00	21420	-
		VI	54	52	5	-	14040	2.75	-	38610.00
		VII	67	42	5	-	14070	2.75	-	38692.50
		VIII	57	32	5	-	9120	2.75	-	25080.00
		IX	47	22	5	-	5170	2.75	-	14217.50
Total						10710	42400	-	21420	116600.00
Grand Total						72930	207960	-	145860	571890.00

The applicant has proposed to carry out 5,71,890Ts of Rough stone and 1,45,860Ts of Gravel formation upto a depth of 45m (below ground level) for the period of first five years and remaining quantity of 1,00,320Ts of Rough Stone will be proposed for the period of second five years.



The proposed tentative yearwise production for 6th to 10th year is given below

Table No-4

Year	Section	Bench	Length in (m)	Width in (m)	Depth in (m)	Mineable Reserves in m³	Bulk Density	Mineable Reserves in (Ts)
VI	XY-AB	II	16	92	5	7360	2.75	20240
Total						7360	-	20240
VII	XY-AB	III	16	82	5	6560	2.75	18040
Total						6560	-	18040
VIII	XY-AB	IV	16	72	5	5760	2.75	15840
		V	10	62	5	3100	2.75	8525
Total						8860	-	24365
IX	XY-AB	V	6	62	5	1860	2.75	5115
		VI	16	52	5	4160	2.75	11440
		VII	8	42	5	1680	2.75	4620
Total						7700	-	21175
X	XY-AB	VII	8	42	5	1680	2.75	4620
		VIII	16	32	5	2560	2.75	7040
		IX	16	22	5	1760	2.75	4840
Total						6000	-	16500
Grand Total						36480	-	100320

5.5		Machineries to be used					
	a.	Drilling		:	It is proposed to use following machineries for quarrying rough stone		
		S.No	Type	Nos	Dia Hole mm	Make	Motive power
		1	Jack hammer	3	32	Atlas Copco	Compressed air
		2	Compressor	1	-	Atlas Copco	Diesel Drive
	b.	Loading			Excavator of 0.90m ³ bucket capacity (with Rock breaker attachment) (2No).		
	c.	Transportation		:	Tipper 4Nos (5/10Ts) capacity.		



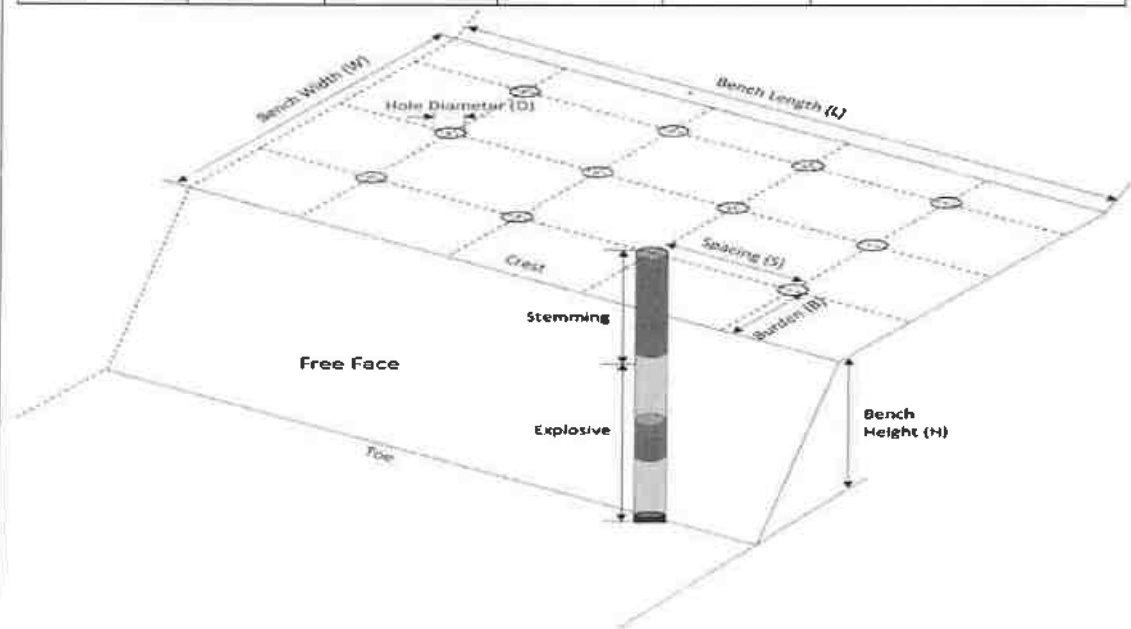
5.6	Disposal of Overburden	: The overburden in the form of Gravel, after the excavation gravel will be directly loaded into tipper to the needy buyers for road project and construction works for filling and leveling of low lying areas.																				
5.7	Brief Note on Conceptual Mining Plan for the entire lease period	Conceptual Mining Plan is prepared with an object of ten years of systematic development of bench lay outs, selection of ultimate pit limit, depth of quarrying, ultimate pit slope, selection of sites for construction of infrastructures etc. Ultimate pit size is designed based on certain practical factors such as the economical depth of mining, safety zones, permissible areas etc. Ultimate Pit dimension is given as under, <table><tr><th colspan="4">Ultimate Pit dimension (M) end of Mining plan Period</th></tr><tr><th>Pit No</th><th>Length (max) in (m)</th><th>Width (Avg) in (m)</th><th>Depth(max) in(m)</th></tr><tr><td>I</td><td>143</td><td>102</td><td>45m (below ground level)</td></tr></table> <table><tr><th colspan="4">Ultimate Pit dimension (M) end of Lease Period</th></tr><tr><td>I</td><td>143</td><td>102</td><td>45m (below ground level)</td></tr></table> Afforestation has been proposed on all along the boundary barrier by planting trees. All the baseline information studies like Air Quality monitoring, Noise and Vibration monitoring, Water Analysis studies will be carried out every year as per the MOEF norms.	Ultimate Pit dimension (M) end of Mining plan Period				Pit No	Length (max) in (m)	Width (Avg) in (m)	Depth(max) in(m)	I	143	102	45m (below ground level)	Ultimate Pit dimension (M) end of Lease Period				I	143	102	45m (below ground level)
Ultimate Pit dimension (M) end of Mining plan Period																						
Pit No	Length (max) in (m)	Width (Avg) in (m)	Depth(max) in(m)																			
I	143	102	45m (below ground level)																			
Ultimate Pit dimension (M) end of Lease Period																						
I	143	102	45m (below ground level)																			



6.0 Blasting:

- 6.1 Blasting Pattern : The massive formation shall be broken into pieces of portable size by drilling and blasting using jack hammers and shot hole blasting. Powder factor of explosives for breaking such hard rock shall be in the order of 6 to 7 Tonnes per Kg of explosives. Blasting parameters are as follows.

Diameter of the hole	Spacing	Depth	Burden for hole	Pattern of hole	Inclination of hole
32-36mm	0.6m	1 to 1.5m	0.6m	Zig Zag	70° from the horizontal



- 6.2 Types of Explosives : Small dia, 25mm slurry explosive are proposed to be used for shattering and heaving effect for removal and winning of Rough stone. No deep hole drilling or primary blasting is proposed.



6.3	Measures proposed to minimize ground vibration due to blasting	➤ Controlled blasting measures will be adopted for minimizing ground vibration and fly rock. ➤ Shallow depths jackhammer drilling and blasting is proposed to be carried out with minimum use of explosive mainly to give shattering effect in rough stone for easy excavation and to control fly rock. <table border="1" data-bbox="764 573 1362 757"> <tr> <td>Number of holes</td> <td>: 128</td> </tr> <tr> <td>Powder factor</td> <td>: 6Ts/Kg of explosives</td> </tr> <tr> <td>Total explosive required</td> <td>: 64Kg slurry explosives</td> </tr> <tr> <td>Charge / hole</td> <td>: 0.5Kg</td> </tr> <tr> <td>Blasting time</td> <td>: 12-2 Pm</td> </tr> </table>	Number of holes	: 128	Powder factor	: 6Ts/Kg of explosives	Total explosive required	: 64Kg slurry explosives	Charge / hole	: 0.5Kg	Blasting time	: 12-2 Pm
Number of holes	: 128											
Powder factor	: 6Ts/Kg of explosives											
Total explosive required	: 64Kg slurry explosives											
Charge / hole	: 0.5Kg											
Blasting time	: 12-2 Pm											
6.4	Storage of Explosives and safety measures to be taken while blasting.	➤ The applicant will engage an authorized explosive agency to carry out the small amount of blasting and it will be supervised by competent and statutory foreman/ mines manager. ➤ <i>The applicant ensure that will appoint the Mate (Should have Valid Blaster Certificate) during Blasting Operation.</i>										

7.0 Mine Drainage:

7.1	Depth of Water table	: The ground water table is reported as 68m below ground level. In the proposed mining plan only 45m (below ground level) depth has been envisaged as workable depth for safe & economic quarrying for the entire lease period. Hence the quarrying operation may not affect the ground water.
7.2	Arrangement and Places where the mine water is finally proposed to be discharged	: The ground water may not rise immediately in this type of mining. However, the rain water percolation and collection of water from the seepage shall be less than 300lpm and it shall be pumped about periodically by a stand by diesel powered Centrifugal pump motivated with 7.5H.P.Motor. The quality of water is potable and it is not contaminated with any hazardous things. Hence, water stored in the quarry pit will be pumped into the adjacent agricultural fields. Further the water stored in the old pit will also be used for plantation purposes



8.0 Other Permanent Structures:

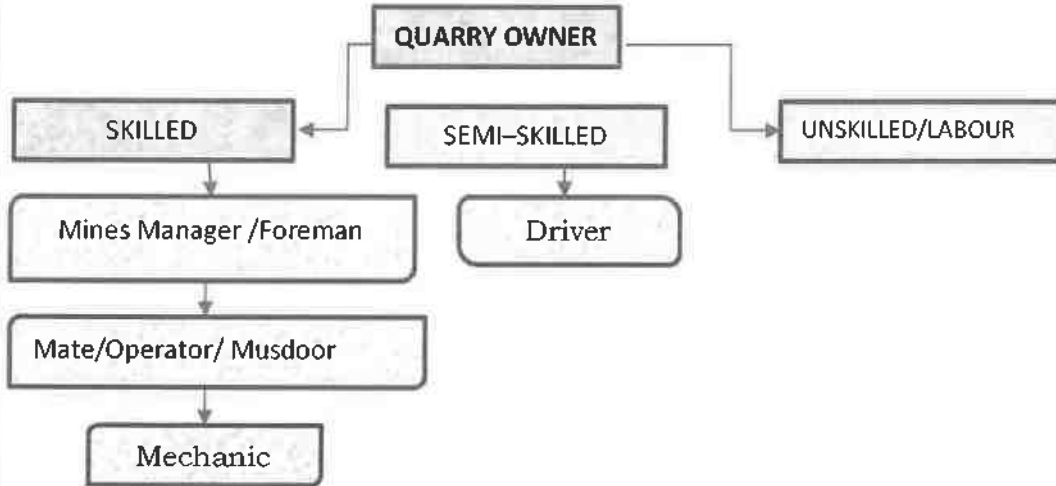
8.1	Habitations / Village	:	There is no habitations situated within a radius of 300m.
8.2	Power lines (HT/LT)	:	There is no Power line (HT/LT) passing within a radius of 50m.
8.3	Water bodies (River, Pond, Lake, Odai, Channel etc)	:	There is Nilavial odai passing on east side of the area and is 10m safety distance maintained. There tank situated on south side of the area and is 420m away from the lease applied area.
8.4	Archeological / Historical Monuments	:	There are no Archaeological / Historical Monuments within a radius of 300m.
8.5	Road (NH, SH, Village Road etc)	:	The National Highway (NH-744) Tenkasi - Tirumangalam is about 11.7km on northwest side of the area. The State Highway (SH-41) Tirunelveli - Rajapalayam is about 5.4Km on west side of the area.
8.6	Places of Worship	:	There are no Places of Worship within a radius of 50m.
8.7	Reserved Forest / Forest / Social Forest / Wild Life Sanctuary etc.,	:	There is no Reserved Forest, Wild Life Sanctuary within a radius of 1Km.
8.8	Any Interstate Border, Protected areas under the Wild Life (Protection) Act, 1972, Critically Polluted Areas as Identified by Central Pollution Control Board and Notified Eco sensitive areas	:	There are No inter State border within a radius of 10Kms.
8.9	Any Other Structures	:	Nil



9.0 Employment Potential & Welfare Measures:

9.1 Employment Potential (Management & Supervisory personal)

The proposed organization chart



1.	Skilled	Mines Manager	1 No.
		Foreman / Mate	2 No.
		Operator	8 No.
		Mechanic	1 No.
2.	Semi-skilled	Driver	4 No.
3.	Unskilled	Labours	12Nos
Total =			28Nos

Allowing 10% absentee, the no. of men of roll will be around 25.

The above man power is adequate to meet out the production schedule and the machinery strength envisaged in the mining plan and to comply the statutory provisions of Mines Safety Regulations.

- **It is been ensured that, child labours under 18 years of age will not be engaged for quarrying operation.**
- **Necessary life insurance policies will be taken by the applicant to all the employees up to the end of the lease period.**

9.2 Welfare Measures

- a. Drinking Water : Packaged drinking water is available from the nearby approved water vendors in Gopalapuram village which is about 1.4Km on northeast side of the area.

b.	Sanitary facilities	:	Semi-permanent latrines & urinals shall be maintained at convenient places for use of labours as per the provisions of Rule (33) of the Mines Rules, 1960 separately for males and females. Washing facilities shall also be arranged as per rule (36) of the Mines Rules, 1960.
c.	First Aid Facility	:	First aid kits are kept in Mines office room, in case of such eventualities the victim will be given first aid immediately at the site and injured person will be taken to the hospital. Hospital is available at distance of 11.5Km (NW) in Rajapalayam the competent and Statutory foreman/ permit manager will be in charge of first aid.
d.	Labour Health	:	As per Mines Rule, Periodic medical examination related to occupational health safety will be conducted to all the workers in applicant's own cost.
e.	Precautionary safety measures to the Labourers:		
	Safety provisions like helmet, goggles, safety shoes, Dust mask, Ear muffs etc., have to be provided as per the circulars and amendments made for Mine labours under the guidance of DGMS being a mechanized operation. Necessary training will be conducted once in a year to all the employees with the help of qualified and experienced officers to train about the safe and systematic quarrying operation.  		



PART - B

10.0 Environmental Management Plan:

10.1	Existing Land Use Pattern	:	1. The area is exhibits almost plain topography covered by Gravel formation. 2. Quarrying operation is proposed up to a depth of 45m (below ground level) for the proposed mining plan period. 3. Fluctuation of Water table in this area is in between 68m and 65m during a year. 4. This region receives the average annual rainfall of 800mm to 900mm. The surrounding area is practiced by the seasonal cultivation. The existing land use pattern is given as under. Table No-5 <table border="1"> <thead> <tr> <th>Sl. No.</th><th>Land Use</th><th>Present Area (Ha)</th><th>Area in use during the quarrying period (Ha)</th></tr> </thead> <tbody> <tr> <td>1.</td><td>Quarrying Pit</td><td>Nil</td><td>1.46.00</td></tr> <tr> <td>2.</td><td>Infrastructure</td><td>Nil</td><td>0.01.00</td></tr> <tr> <td>3.</td><td>Roads</td><td>Nil</td><td>0.01.00</td></tr> <tr> <td>4.</td><td>Green Belt</td><td>Nil</td><td>0.42.50</td></tr> <tr> <td>5.</td><td>Unutilized</td><td>1.90.50</td><td>Nil</td></tr> <tr> <td></td><td>Total =</td><td>1.90.50</td><td>1.90.50</td></tr> </tbody> </table>	Sl. No.	Land Use	Present Area (Ha)	Area in use during the quarrying period (Ha)	1.	Quarrying Pit	Nil	1.46.00	2.	Infrastructure	Nil	0.01.00	3.	Roads	Nil	0.01.00	4.	Green Belt	Nil	0.42.50	5.	Unutilized	1.90.50	Nil		Total =	1.90.50	1.90.50
Sl. No.	Land Use	Present Area (Ha)	Area in use during the quarrying period (Ha)																												
1.	Quarrying Pit	Nil	1.46.00																												
2.	Infrastructure	Nil	0.01.00																												
3.	Roads	Nil	0.01.00																												
4.	Green Belt	Nil	0.42.50																												
5.	Unutilized	1.90.50	Nil																												
	Total =	1.90.50	1.90.50																												
10.2	Water Regime	:	Water table in this area is noticed at a depth of 68m and presently, in the proposed mining plan only 45m (below ground level) depth has been envisaged as workable depth for safe & economic quarrying for the entire lease period. hence, it will not affect the ground water depletion of this area.																												
10.3	Flora and Fauna	:	Except acacia bushes, no other valuable trees are noticed in the applied area. Further, neither flora of botanical interest nor fauna of zoological interest is noticed in this area.																												



10.4	Climatic conditions	: Generally subtropical climatic condition prevails throughout the year and there is no sharp variation in climate. This District receives rain both in south west and north east monsoon. The average rainfall is about 800mm to 900mm and the temperature ranges from 18°C during winter and to a maximum of 42°C during the summer.																				
10.5	Human Settlement	: The nearest habitations with the population is given as under. Table No-6 <table><tr><th>S. No</th><th>Name of the Village</th><th>Approximate distance & Direction from lease applied area</th><th>Approximate population</th></tr><tr><td>1.</td><td>Gopalapuram</td><td>1.4Km - NE</td><td>1000</td></tr><tr><td>2.</td><td>Kuruchiyarpatti</td><td>0.8km - NW</td><td>800</td></tr><tr><td>3.</td><td>Mettuvadakarai</td><td>1.5km - SE</td><td>500</td></tr><tr><td>4.</td><td>Muthanathi</td><td>1.4km - W</td><td>600</td></tr></table>	S. No	Name of the Village	Approximate distance & Direction from lease applied area	Approximate population	1.	Gopalapuram	1.4Km - NE	1000	2.	Kuruchiyarpatti	0.8km - NW	800	3.	Mettuvadakarai	1.5km - SE	500	4.	Muthanathi	1.4km - W	600
S. No	Name of the Village	Approximate distance & Direction from lease applied area	Approximate population																			
1.	Gopalapuram	1.4Km - NE	1000																			
2.	Kuruchiyarpatti	0.8km - NW	800																			
3.	Mettuvadakarai	1.5km - SE	500																			
4.	Muthanathi	1.4km - W	600																			
10.6	Plan for Air, Dust Suppression	: Air or dust expected to be generated from drilling process, hauling roads, places of excavation etc., will be suppressed by periodical wetting of land by water spraying. Wet drilling and dust extractor arrangements will be provided to drilling units so as to control raise of dust from the site of drilling. Operators, those exposed directly to such conditions will be provide such protective equipment like mask, ear plug, helmet, gloze etc., as per the Mines Act.																				
10.7	Plan for Noise Control	: Quarrying of Rough Stone will be carried out by drilling and blasting by using low power explosives, and hence, noise will be very minimum. However, periodical noise level monitoring will be carried out to check the noise level in and around the quarry site. Nowhere the noise level should exceed the permissible limit of 80db during the quarry working hours.																				



10.8	Environmental Impact Assessment Statement Describing Impact on mining on the next Five years	:	The mining plan proposed is for a small production of Rough stone without involving deep hole drilling and heavy blasting. Such limited mining activity is not likely to cause any impact adversely on environment as far as pollution of air, water and noise is concerned, anyhow environmental impact studies will be conducted as per EIA notification issued by MOEF.
10.9	Proposal for Waste Management	:	There is no waste anticipated in this rough stone quarry operation.
10.10	Proposal of Reclamation of Land affected during mining activities and at the end of mining.	:	In the proposed mining plan 45m (below ground level) depth has been envisaged as workable depth for safe & economic mining during the lease period. Hence, after quarry reaches ultimate pit limit (for end of lease period) of 45m depth, fencing will be constructed around the quarried pits to prevent inherent entry of the public and cattle.
10.11	Program for Afforestation	:	The 7.5m and 10m safety distance along the lease boundary has been identified to be utilized for afforestation. Appropriate native species of Neem/Pungan trees will be planted in the first year. Nearly 4250Sqm area is proposed to use under afforestation by planting 510nos of Neem/Pungan trees during first year with an anticipated survival rate of 80%. The Quarry landuse, layout and afforestation plan is shown in Plate No.III.
10.12	Proposed Financial Estimate / Budget for (EMP) Environment Management		
	A. Fixed Asset Cost:		
	1. Land Cost (600000/1Ha)=		Rs. 11,43,000
	2. First aid room and accessories		Rs.1,00,000
	3. Labour Shed		Rs.1,00,000
	4. Sanitary Facility		Rs.1,00,000
	Total=		Rs. 14,43,000/-



B. Operational Cost:		
1. Machineries	:	Rs.80,00,000/-
2. Fencing cost	:	Rs. 1,50,000
Total	:	Rs.81,50,000/-
C.EMP Cost:		Budget Provision for the entire quarrying period.
Expenditure		Air Quality Sampling = Rs. 40,000/-
		Water Quality Sampling = Rs. 40,000/-
		Noise Monitoring = Rs. 20,000/-
		Ground vibration test = Rs. 20,000/-
1. Drinking water facility		Rs.1,00,000/-
2. Sanitary Arrangements		Rs. 50,000/-
3. Safety kids		Rs. 50,000/-
4. Water sprinkling		Rs. 1,50,000/-
5. Afforestation		Rs. 80,000/-
Total=		Rs. 5,50,000/-
Total Project Cost (A+B+C)		Rs. 1,01,43,000 /-
CSR Cost(2% of Total Project Cost)		Rs. 2,02,860 /-
11.0 Mine Closure Plan:		
11.1	Steps proposed for phased restoration, reclamation of already mined out area.	: There is no proposal for back filling, reclamation and rehabilitation. The quarried pits after the end of the life of lease will be fenced to prevent inherent entry of public and cattles.
11.2	Measures to be under taken on mine closure as per Act & Rules	: Measures will be taken as per the Acts and Rules. The quarried pit will be fenced by using Barbed wire fencing to prevent inherent entry of public and cattle.
11.3	Mitigation measures to be undertaken for safety and restoration/ reclamation of the already mined out area	: Mitigation measures: Drilling will be carried out by wet drilling mode to control the dust propagation into the air. Blasting will be carried out on limited scale. Mist Water spraying on haul road is proposed to prevent the dust propagation into the air.



12.0 Any Other Details Intend to Furnish by the Applicant:

- (i) Permission will be obtained from the District Mines Office to extract the Rough Stone from the Boundary barriers and for slopes.
- (ii) Care and precautionary measures will be taken for the safety of workers as per Rules and Acts.
- (iii) The applicant will endeavor every attempt to quarry the Rough Stone economically without any wastage and to improve the environment and ecology.
- (iv) The Mining Plan is prepared by incorporating the conditions stipulated in the precise area communication issued and relevant mining laws in force.
- (v) Any violation pointed out by the inspecting authorities shall be rectified as per the guidelines of the Department.

Prepared by


C.Natarajan, M.Sc., M.Phil.,
Qualified Person
C.NATARAJAN M.Sc., M.Phil.,
Qualified Person

Place : Salem
Date : 19.05.2025

This Mining is approved based on guidelines/ instructions issued in the GMA, Letter No.3368/LC/2012 dated 19-11-2012 and incorporation of the particulars specified in the letter No. KV/1/1216/2024.
Dated 05/06/24


Assistant Director of Geology & Mining
Virudhunagar

This Mining Plan is approved Subject to the conditions / Stipulation indicated in the Mining Plan Approval

Letter Rec. No.

Dated

புவியியல் மற்றும் சுரங்கத்துறை

ந.க.எண்:கேவி1/1216/2024

உதவி இயக்குநர் அலுவலகம்,
மாவட்ட ஆட்சியர் அலுவலக வளாகம்,
விருதுநகர்.

நாள்:16.05 .2025.



குறிப்பாணை

பொருள்: கனிமங்களும் குவாரிகளும் - விருதுநகர் மாவட்டம் - வெம்பக்கோட்டை வட்டம் - கோபாலபுரம் கிராமம் பட்டா புலஎண்கள்- 623/1C (0.1.00), 623/1D (0.3.00), 623/1G (0.3.00), 623/2A (0.1.50), 623/28 (0.42.00), 623/2C (0.46.50), 623/1A (0.18.00), 623/18 (0.17.50), 623/1E (0.28.50) 0 623/1F (0.29.50) மொத்த விஸ்தீரணம் 1.90.50 ஹெக்டேர் பரப்பு நிலங்களில் பத்து வருடங்களுக்கு உடைகல் மற்றும் கிராவல் குவாரி உரிமம் வழங்கல் - உகந்த பரப்பு (Precise Area) தேர்வு செய்யப்பட்டது - சுரங்கத்திட்டம் மற்றும் மாநில அளவிலான சுற்றுச்சூழல் தாக்க மதிப்பீட்டு ஆணையத்தின் இசைவினைப் பெற்று சமர்ப்பிக்க கோருவது - தொடர்பாக.

- பார்வை: 1. திரு.கபில்தேவ் த/பெ பாஸ்கரன்,1/57 கோபாலபுரம்,வெம்பக்கோட்டை வட்டம் என்பவரது விண்ணப்பம் நாள்: 05.11.2024.
2. இவ்வலுவலக கடிதம் எண் ந.க.கேவி1/1216/2024, நாள்: 09.11.2024 (வருவாய் கோட்டாட்சியர், சாத்தூர் அவர்களுக்கு முகவரியிட்டது).
3. சாத்தூர், வருவாய் கோட்டாட்சியர் கடித எண் மூ.மு..அ2/6346/2024, நாள்: 17.04.2025.
4. உதவி இயக்குநர், புவியியல் மற்றும் சுரங்கத்துறை அவர்களின் புலத்தணிக்கை அறிக்கை நாள்: 13.05.2025.
5. 1959 -ம் வருடத்திய தமிழ்நாடு சிறுகனிம சலுகை விதிகள் 41 மற்றும் 42.
6. அரசாணை எண்.169 தொழில் (எம்.எம்.சி.1) துறை, நாள்: 04.08.2020.
7. தொடர்புடைய ஆவணங்கள்.



விருதுநகர் மாவட்டம் - வெம்பக்கோட்டை வட்டம் - கோபாலபுரம் கிராமம் பட்டா
புலஎண்கள்- 623/1C (0.1.00), 623/1D (0.3.00), 623/1G (0.3.00), 623/2A (0.1.50),
623/28 (0.42.00), 623/2C (0.46.50), 623/1A (0.18.00), 623/18 (0.17.50), 623/1E
(0.28.50) 0 623/1F (0.29.50) மொத்த விஸ்தீரணம் 1.90.50 ஹெக்டேர் பரப்பு
நிலங்களில் பத்து வருடங்களுக்கு உடைகல் மற்றும் கிராவல் குவாரி குத்தகை உரிமம்
கோரி விருதுநகர் மாவட்டம், ராஜப்பாளையம் வட்டம், புதுப்பாளையம், கே.ஆர் நகர் (post)
, டீச்சர்ஷ் காலனி 125/2-யில் வசித்து வரும், திரு.கபில்தேவ் த/பெ பாஸ்கரன், என்பவர்
பார்வை 1-ல் காணும் விண்ணப்பத்தினை உரிய ஆவணங்களுடன் சமர்ப்பித்துள்ளார்.

சாத்தூர், வருவாய் கோட்டாட்சியர், அவர்களின் அறிக்கையில் கல்குவாரி உரிமம்
வழங்கக் கோரியுள்ள புல எண்கள் வெம்பக்கோட்டை வட்டம், கோபாலபுரம் கிராமம்
பட்டா எண் : 2440 மற்றும் 2450-ல் புலஎண்கள்- 623/1C (0.1.00), 623/1D (0.3.00),
623/1G (0.3.00), 623/2A (0.1.50), 623/2B (0.42.00), 623/2C (0.46.50), 623/1A
(0.18.00), 623/1B (0.17.50), 623/1E (0.28.50) 0 623/1F (0.29.50) மொத்த விஸ்தீரணம்
1.90.50 ஹெக்டேர் பரப்பு நிலம் திரு.கபில்தேவ் த/பெ பாஸ்கரன் என்ற பெயரில்
கோபாலபுரம் கிராமக்கணக்கில் தாக்கலாகியுள்ளது எனவும்,

மனுதாரர் குவாரி உரிமம் வழங்கக் கோரிய புலங்களுக்கு நான்குமால் விபரம்

வடக்கு - புல எண். 611 -வண்டிப்பாதை,

தெற்கு புல எண்.627/1, 628 பொன்னுச்சாமி நாயக்கர் வகை (ம) சீனியம்மான்,

கிழக்கு -புல எண்.624 - தீர்வை ஏற்படாத தரிசு,

மேற்கு -புல எண்.622/4, 5 விநாயக மூர்த்தி, எனவும்,

குவாரி குத்தகை உரிமம் வழங்கக் கோரும் புலங்களில் எல்லைகள்
வரையறுக்கப்பட்டு எல்லை கற்கள் நடப்பட்டுள்ளன. குவாரி குத்தகை உரிமம் வழங்கக்
கோரும் புலத்திலிருந்து 500 மீ சுற்றளவில் கிராம நத்தம், அங்கீகரிக்கப்பட்ட
குடியிருப்புகள், கட்டுமானங்கள், ஆறுகள், கண்மாய்கள், வனப்பகுதிகள், சரணாலயங்கள்,
புரதானச் சின்னங்கள் ஏதும் இல்லை.குவாரி அமையப்பெறவுள்ள கூட்டுப்புலத்திற்கு
கிழக்கே புல எண்.624-ல் தீர்வை ஏற்படாத தரி நிலத்தின் மேல் ஓரத்தில் சில்லோடை (ம)
முடிவடைந்த அரசு குவாரி உள்ளது. மேலும், வடபுறம் சுமார் 200 மீ சுற்றளவில்
அமைந்துள்ள புல எண்கள். 586/11, 12, 13, 14, 15, 17,18 ஆகியவற்றில்
திரு.சண்முகவேல் என்பவரின் முடிவடைந்த குவாரியும், வடகிழக்கில் அமைந்துள்ள புல
எண்கள் 574, 559, 558/1, 2, 557/1, 2 ஆகியவற்றில் திரு.ராஜமோகன் என்பவருக்குச்
சொந்தமான செயல்படும் குவாரி ஒன்றும், தென்கிழக்கில் சுமார் 420 மீ-க்கு அப்பால்
அமைந்துள்ள புல எண்கள். 567/2யு 568/18 ஆகியவற்றில் திரு.ஆறுமுகம் என்பவருக்குச்



சொந்தமான செயல்படும் கல்குவாரியும், தென்மேற்கில் சுமார் 200 மீட்டர் அமைந்துள்ள புல எண்கள் 635/4 மற்றும் 636 ஆகியவற்றில் திருமருகேசன் என்பவரது, செயல்படும் கல்குவாரியும் அமைந்துள்ளது எனவும்,

தாவா வழக்கு எவையேனும் குவாரி குத்தகை உரிமம் கோரும் புலத்தில் இல்லை. குவாரி அமையப்பெறவுள்ள புலங்கள் அரசின் நில எடுப்பு பிரேரணையில் மற்றும் தடையாணை புத்தகத்தில் இடம் பெறவில்லை. குவாரி குத்தகை உரிமம் கோரும் கூட்டுப்புலத்தில் புல எண்கள் 623/2B, 623/2C ஆகியவற்றில் சென்ற விவசாய மின் இணைப்பு கம்பிகள், மின்கம்பங்கள், மின்வாரிய துறையின்மூலம் அகற்றப்பட்டுவிட்டது. மேற்கண்ட குவாரி அமைய உள்ள கிராமத்தில் "அ1" நோட்டீஸ் விளம்பரம் செய்யப்பட்டதில், நாளது தேதிவரை பொதுமக்களிடமிருந்து ஆட்சேபணை ஏதும்வரப்பெறவில்லை. மனுதாரர் குவாரி உரிமம் கோரும் புலமானது வெம்பக்கோட்டை ஊராட்சி ஒன்றியத்தைச் சேர்ந்த கோபாலபுரம் ஊராட்சிக்கு உட்பட்டது எனவும்,

எனவே, விருதுநகர் மாவட்டம், வெம்பக்கோட்டை வட்டம், கோபாலபுரம் கிராமம், புல எண்கள் 623/1C (0.1.00), 623/1D (0.3.00), 623/1G (0.3.00), 623/2A (0.1.50), 623/2B (0.42.00), 623/2C (0.46.50), 623/1A (0.18.00), 623/18 (0.17.50), 623/1E (0.28.50) 0 623/1F (0.29.50) விஸ்தீரணம் 1.90.50 ஹெக்டேர்ஸ் பரப்பளவில் பத்து (10) வருடங்களுக்கு உடைகல் மற்றும் கிராவல் மண் வெட்டியெடுக்க திரு.கபில்தேவ், த/பெ. பாஸ்கரன் என்பவருக்கு தமிழ்நாடு சிறுகனிம விதிகளின்படி அனுமதி வழங்கப் பரிந்துரை செய்கிறேன் என்பதைப் பணிவுடன் தெரிவித்துள்ளார்.

உதவி இயக்குநர் , புவியியல் மற்றும் சுரங்கத்துறை, அவர்களின் அறிக்கையில் விண்ணப்பிக்கப்பட்ட புலங்கள் புஞ்சை வகைப்பாடுடைய தரிசு நிலங்களாகும். புலங்களின் மேற்பரப்பு சமதளமாகவும், விவசாய பணிகள் ஏதுமின்றி தரிசாக உள்ளது. புலங்களின் மேற்பரப்பில் காணப்படும் மண், சிதைந்த பாறைகளை (Weathered Rock), தொடர்ந்து சார்னகைட் (Charnockite) எனப்படும் கடின பாறைகள் (Hard rock) உள்ளது அருகில் உள்ள குவாரியில் ஆய்வு செய்ததில் தெரியவருகிறது. கடின பாறைகளில் காணப்படும் வேறுபட்ட நிறங்கள் (Different in colours), இணைப்புகள் (Joints), பிளவுகள், கிரல்கள் (Cracks) வெடிப்புகள் மற்றும் மாறுபட்ட அளவு கொண்ட கனிமங்கள் காரணமாக இப்பாறைகளில் மெருகேற்றக் கூடிய வண்ண கற்களை (Polished Granite / Blocks) உற்பத்தி செய்ய இயலாது. இவ்வகை பாறைகளில் இருந்து கட்டிடப்பணிகள் மற்றும் சாலை / இரயில்வே பணிகளுக்கு தேவைப்படும் கற்கள், ஜல்லிகள் மற்றும் எம்-சாண்ட் ஆகியவற்றை உற்பத்தி செய்ய இயலும் எனவும்,

விண்ணப்பிக்கப்பட்ட புலங்களை சுற்றிலும் 300 மீட்டர் சுற்றளவில், பள்ளிகள், கோயில்கள், மசூதிகள், சுடுகாடு ஏதும் இல்லை. 50 மீட்டர் சுற்றளவில் தேசிய / மாநில

நெடுஞ்சாலைகள், ஆறுகள் இல்லை. உயர்வகை மாங்கள் வனத்துறையால் பாதுகாக்கப்பட்ட பகுதியாக அறிவிக்கப்பட்ட சரணாலயங்கள், குடிய பூங்காக்கள் சுற்றுச்சூழல் உணர் திறன் மிக்க பகுதிகள் (ECO-SENSITIVE ZONE) கி.மீட்டர் சுற்றளவில் காடுகள், 500 மீட்டர் சுற்றளவில் அருங்காட்சியக துறையின் மூலம் பாதுகாக்கப்பட்ட பகுதிகளாக அறிவிக்கப்பட்ட இடங்கள் மற்றும் வரலாற்று சின்னங்கள் எதும் இல்லை எனவும்,

குவாரி அமையப்பெறவுள்ள கூட்டுப்புலத்திற்கு கிழக்கே புல எண்:624-ல் தீர்வை ஏற்படாத தரி நிலத்தின் மேல் ஓரத்தில் சில்லோடை (ம) முடிவடைந்த அரசு குவாரி உள்ளது. மேலும், வடபுறம் சுமார் 200 மீ சுற்றளவில் அமைந்துள்ள புல எண்கள். 586/11, 12, 13, 14, 15, 17,18 ஆகியவற்றில் திரு.சண்முகவேல் என்பவரின் முடிவடைந்த குவாரியும், வடகிழக்கில் அமைந்துள்ள புல எண்கள் 574, 559, 558/1, 2, 557/1, 2 ஆகியவற்றில் திரு.ராஜமோகன் என்பவருக்குச் சொந்தமான செயல்படும் குவாரி ஒன்றும், தென்கிழக்கில் சுமார் 420 மீ-க்கு அப்பால் அமைந்துள்ள புல எண்கள். 567/2A 568/1B ஆகியவற்றில் திரு.ஆறுமுகம் என்பவருக்குச் சொந்தமான செயல்படும் கல்குவாரியும், தென்மேற்கில் சுமார் 200 மீட்டர் தொலைவில் அமைந்துள்ள புல எண்கள் 635/4 மற்றும் 636 ஆகியவற்றில் திரு.முருகேசன் என்பவரது செயல்படும் கல்குவாரியும் அமைந்துள்ளது. குவாரி குத்தகை உரிமம் கோரும் கூட்டுப்புலத்தில் புல எண்கள். 623/2B, 623/2C ஆகியவற்றில் சென்ற விவசாய மின் இணைப்பு கம்பிகள், மின்கம்பங்கள், மின்வாரிய துறையின்மூலம் அகற்றப்பட்டுவிட்டது எனவும்,

எனவே, விண்ணப்பதாரர் திரு.பாஸ்கரன் மகன் திரு.கபில்தேவ் என்பவரின் கோரிக்கையினை ஏற்று விருதுநகர் மாவட்டம் வெம்பக்கோட்டை வட்டம் , கோபாலபுரம் கிராமம் பட்டா எண்: 2440 மற்றும் 2450-ல் புலஎண்கள்- 623/1C (0.1.00), 623/1D (0.3.00), 623/1G (0.3.00), 623/2A (0.1.50), 623/2B (0.42.00), 623/2C (0.46.50), 623/1A (0.18.00), 623/1B (0.17.50), 623/1E (0.28.50) 0 623/1F (0.29.50) மொத்த விஸ்தீரணம் 1.90.50 ஹெக்டேர் பரப்பு நிலங்களில் ஐந்து (5) வருடங்களுக்கு உடைகல் மற்றும் கிராவல் குவாரி குத்தகை உரிமம் தமிழ்நாடு சிறுகனிம சலுகை விதிகள் விதிஎண்.19 மற்றும் 20-ன் படி பின்வரும் நிபந்தனைகளுக்குட்பட்டு வழங்க பரிந்துரை செய்துள்ளார்.

நிபந்தனைகள்:

1. அருகிலுள்ள பட்டா நிலங்களுக்கு 7.5 மீ பாதுகாப்பு இடைவெளி விடுத்து குவாரி செய்தல் வேண்டும்.
2. புல எண்: 611 வண்டிப்பாதை மற்றும் புல எண்: 623 கிழக்கே உள்ள ஓடை உள்ளது. எனவே வண்டிப்பாதை மற்றும் ஓடைக்கு உரிய பாதுகாப்பு இடைவெளி விடுத்து குவாரி செய்தல் வேண்டும்.



3. பொதுமக்கள் / விவசாய நிலங்களுக்கு பாதிப்பு ஏற்படாத வகையில் தகுதி வாய்ந்த அங்கீகரிக்கப்பட்ட நபர்கள் மூலம் வெடிமருந்துகள் சேமிக்கப்பட்டு குவாரியில் வெடித்தல் வேண்டும். குவாரியில் குறைந்த சக்தி கொண்ட வெடி மருந்துகளை பயன்படுத்தல் வேண்டும்.
4. சுரங்கத்திட்டம் மற்றும் சுற்றுச்சூழல் தடையில்லாச் சான்று குத்தகை உரிமம் வழங்குவதற்கு முன் சமர்ப்பிக்க வேண்டும்.
5. குவாரியில் வேலை செய்யும் தொழிலாளர்கள் தொழிலாளர் நலவாரியம்³ மற்றும் காப்பீடு திட்டத்தில் பதிவு செய்து தொழிலாளர் நலன் பேண்பட வேண்டும்.
6. குழந்தை தொழிலாளர்களை குவாரி பணியில் அமர்த்தக் கூடாது.
7. கனிமங்களை வாகனங்களில் கொண்டு செல்லும் போது பாதசாரிகள், பொது மக்கள் மற்றும் பிற வாகனங்கள் பாதிக்காதவண்ணம் தார்பாப்புகள் கொண்டு மூடி எடுத்துச் செல்ல வேண்டும்.

எனவே, துறை அலுவலர்களின் பரிந்துரையினை ஏற்றும் நிபந்தனைகளுக்கு உட்பட்டும், விருதுநகர் மாவட்டம் வெம்பக்கோட்டை வட்டம், கோபாலபுரம் கிராமம் பட்டா எண்: 2440 மற்றும் 2450-ல் புலனள்கள்- 623/1C (0.1.00), 623/1D (0.3.00), 623/1G (0.3.00), 623/2A (0.1.50), 623/2B (0.42.00), 623/2C (0.46.50), 623/1A (0.18.00), 623/1B (0.17.50), 623/1E (0.28.50) 0 623/1F (0.29.50) மொத்த விஸ்தீரணம் 1.90.50 ஹெக்டேர் பரப்பு நிலங்களில் பத்து வருடங்களுக்கு உடைகல் மற்றும் கிராவல் குவாரி உரிமம் 1959 -ம் வருடத்திய தமிழ்நாடு சிறுகனிம சலுகை விதிகள் விதி எண்: 19 (1) மற்றும் 20 -ன் படி வழங்க தகுதி வாய்ந்த நிலப்பரப்பாக (Precise Area) கருதப்படுகிறது.

எனவே, தமிழ்நாடு சிறுகனிம சலுகை விதிகள்-1959 விதி எண்:41-ன்படி குவாரி பணி மேற்கொள்வது தொடர்பாக வரைவு சுரங்கத் திட்டத்தினை (Mining Plan) 90 தினங்களுக்குள்ளும் விதி எண்:42-ன்படி மாநில அளவிலான சுற்றுச்சூழல் தாக்க மதிப்பீட்டு ஆணையத்தின் (State Level Environmental Impact Assessment Authority) இசைவினைப் பெற்று சமர்ப்பிக்குமாறும் மனுதாரர் திரு.பாஸ்கரன் மகன் திரு. திரு.கபில்தேவ் என்பவர் கேட்டுக் கொள்ளப்படுகிறார்.

உதவி இயக்குநர்,
புவியியல் மற்றும் சுரங்கத்துறை,
விருதுநகர்.

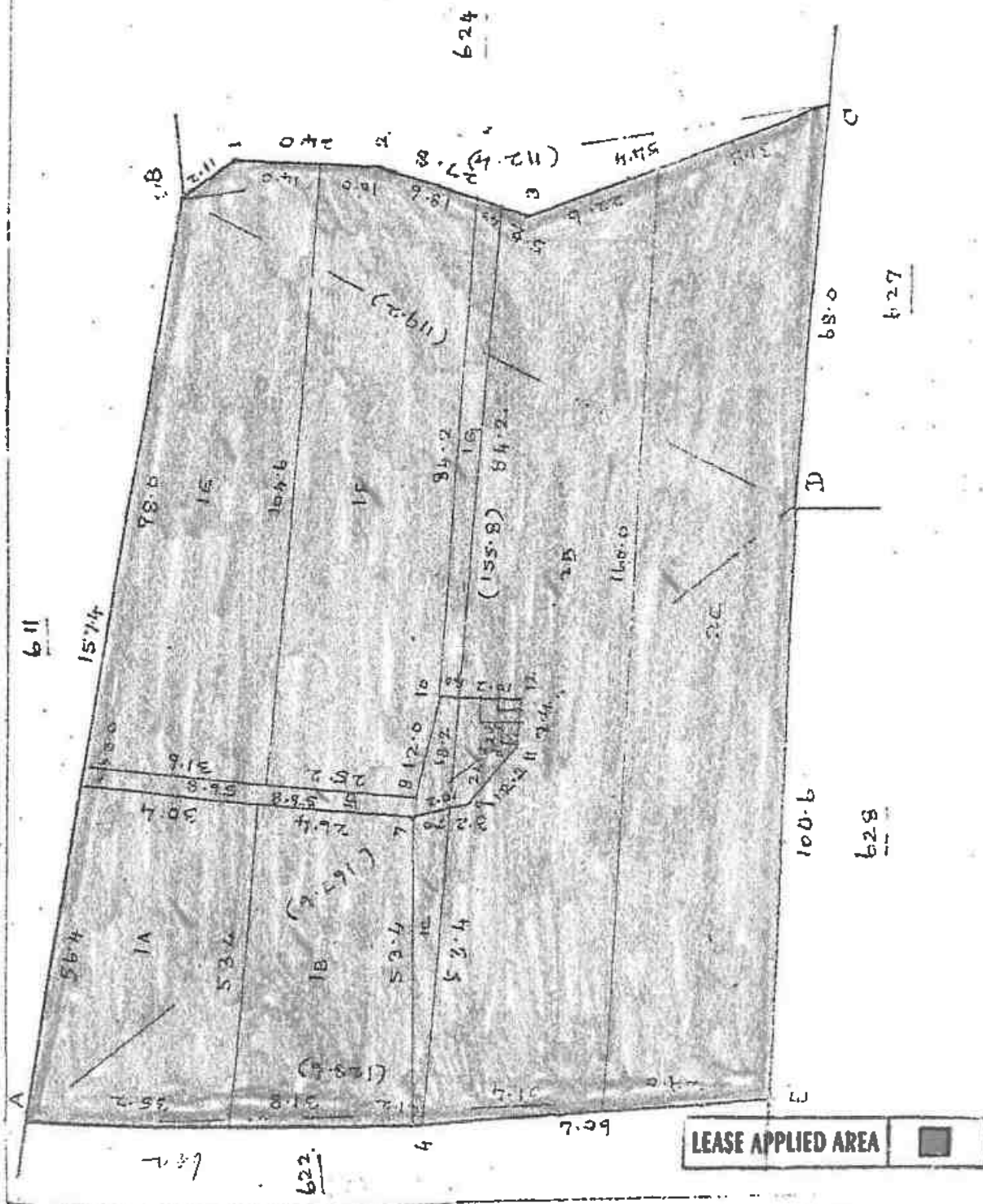
பெறுநர்
திரு.கபில்தேவ் த/பெ பாஸ்கரன்,
125/2 டீச்சர்ஸ் காலனி,
கே.ஆர் நகர் (post),
புதுப்பாளையம்,
இராஜபாளையம் வட்டம்
விருதுநகர் மாவட்டம்.

நகல்
உறுப்பினர் செயலர்,
மாநில சுற்றுசூழல் தாக்க மதிப்பீட்டு ஆணையம் (SEIAA),
சென்னை.

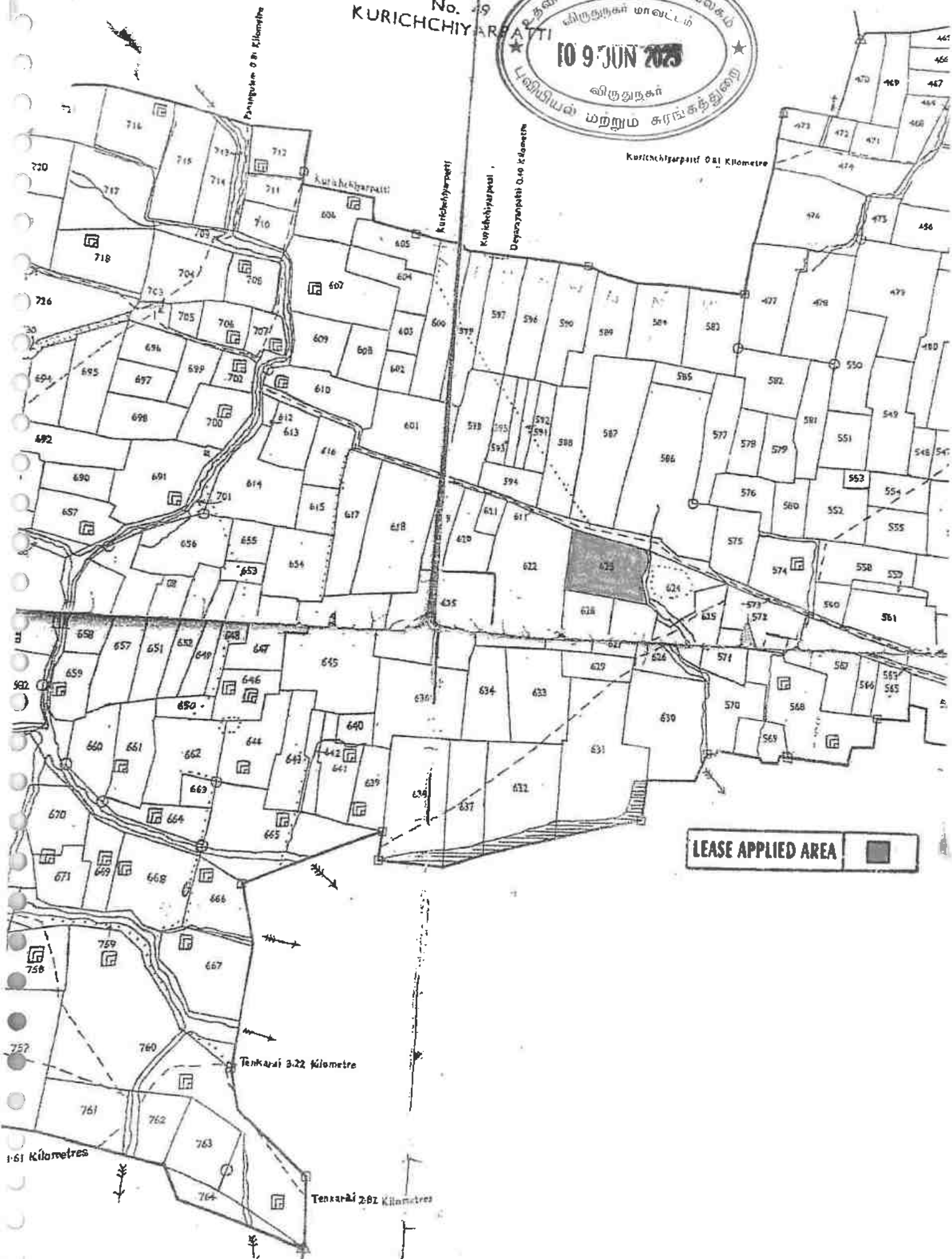


பரப்பு - இலட்சக்கோடி

1. *Chlorophyll*



550 1150

No. 49
KURICHCHIYARATTI



தமிழ்நாடு அரசு

வருவாய்த் துறை

நில உரிமை விபரங்கள் : இ. எண் 10(1) பிரிவு

மாவட்டம் : விருதுநகர்

வட்டம் : வெம்பக்கோட்டை

வருவாய் கிராமம் : கோபாலபுரம்

பட்டா எண் : 2440

உரிமையாளர்கள் பெயர்

1. பாஸ்கரன்

மகன்

கபில்தேவ்



புல எண்	உட்பிரிவு	புன்செய்		நன்செய்		மற்றவை		குறிப்புரைகள்
		பரப்பு	தீர்வை	பரப்பு	தீர்வை	பரப்பு	தீர்வை	
		ஹெக் - ஏர்	ரூ - பை	ஹெக் - ஏர்	ரூ - பை	ஹெக் - ஏர்	ரூ - பை	
623	1C	0 - 1.00	0.06	--	--	--	--	2024/0103/26/247119- -- ----- 03-08-2024
623	1D	0 - 3.00	0.06	--	--	--	--	2024/0103/26/247119- -- --பம்புசெட் கிணறு- ---- 03-08-2024
623	1G	0 - 3.00	0.06	--	--	--	--	2024/0103/26/247119- -- ----- 03-08-2024
623	2A	0 - 1.50	0.06	--	--	--	--	2024/0103/26/247119- -- --சதுரக்கிணறு பம்புசெட்----- 03-08- 2024
623	2B	0 - 42.00	0.84	--	--	--	--	2024/0103/26/247119- -- ----- 03-08-2024
623	2C	0 - 46.50	0.93	--	--	--	--	2024/0103/26/247119- -- ----- 03-08-2024
		0 - 97.00	2.01					

குறிப்பு :



மேற்கண்ட தகவல் / சான்றிதழ் நகல் விவரங்கள் மின் பதிவேட்டிலிருந்து
1. பெறப்பட்டவை. இவற்றை தாங்கள் <https://eservices.tn.gov.in> என்ற இணைய
தளத்தில் 26/09/010/02440/100090 என்ற குறிப்பு எண்ணை உள்ளீடு செய்து
உறுதி செய்துகொள்ளவும்.

2. இத் தகவல்கள் 07-08-2024 அன்று 03:43:49 PM நேரத்தில் அச்சடிக்கப்பட்டது.

3. கைப்பேசி கேமராவின் 2D barcode படிப்பான் மூலம் படித்து 3G/GPRS வழி
இணையதளத்தில் சரிபார்க்கவும்



தமிழ்நாடு அரசு

வருவாய்த் துறை

நில உரிமை விபரங்கள் : இ- எண் 10(1) பிரிவு .

வட்டம் : வெம்பக்கோட்டை

பட்டா எண் : 2450

மாவட்டம் : விருதுநகர்

வருவாய் கிராமம் : கோபாலபுரம்

உரிமையாளர்கள் பெயர்

மகன்

கபில்தேவ்

பாஸ்கரன்

புல எண்	உட்பிரிவு	புன்செய்		நன்செய்		மற்றவை		குறிப்புரைகள்
		பரப்பு	தீர்வை	பரப்பு	தீர்வை	பரப்பு	தீர்வை	
		ஹெக் - ஏர்	ரூ - பை	ஹெக் - ஏர்	ரூ - பை	ஹெக் - ஏர்	ரூ - பை	
623	1A	0 - 18.00	0.36	--	--	--	--	2024/0103/26/251525- ----- 31-08-2024
623	1B	0 - 17.50	0.35	--	--	--	--	2024/0103/26/251525- ----- 31-08-2024
623	1E	0 - 28.50	0.58	--	--	--	--	2024/0103/26/251525- ----- 31-08-2024
623	1F	0 - 29.50	0.58	--	--	--	--	2024/0103/26/251525- -----பரிந்துரை----- 31-08-2024
		0 - 93.50	1.87					

குறிப்பு :



- மேற்கண்ட தகவல் / சான்றிதழ் நகல் விவரங்கள் மின் பதிவேட்டிலிருந்து பெறப்பட்டவை. இவற்றை தாங்கள் <https://eservices.tn.gov.in> என்ற இணைய தளத்தில் 26/09/010/02450/100091 என்ற குறிப்பு எண்ணை உள்ளீடு செய்து உறுதி செய்துகொள்ளவும்.
- இத் தகவல்கள் 31-08-2024 அன்று 05:59:11 PM நேரத்தில் அச்சடிக்கப்பட்டது.
- சைகப்பேசி கேமராவின் 2D barcode படிப்பான் மூலம் படித்து 3G/GPRS வழி இணையதளத்தில் சரிபார்க்கவும்

A - VIRUDHUNAGAR TALUK - VEMBAKKOTTAI VILLAGE - GOPALAPURAM

622-9	7-3	4	2	00	0	23.00	0	16	550-விநாயக மூர்த்தி	
TOTAL FOR SURVEY NUMBER- 622						3	41.00	6	04	
623-1	7-3	4	2	00	0	18.00	0	36	1779-முத்துகிருஷ்ணன் என்ற கிருஷ்ணன்	
623-1	7-3	4	2	00	0	17.50	0	35	493-ராமசாமி நாயக்கர்	
623-1	7-3	4	2	00	0	1.00	0	06	365-நாராயணசாமி நாயக்கர்	
623-1	7-3	4	2	00	0	3.00	0	06	823-அச்சய நாயக்கர் மற்றும் 3 நபர்(கள்)	
623-1	7-3	4	2	00	0	20.50	0	58	1779-முத்துகிருஷ்ணன் என்ற கிருஷ்ணன்	
623-1	7-3	4	2	00	0	29.00	0	58	493-ராமசாமி நாயக்கர்	0.29.5 X
623-1	7-3	4	2	00	0	3.00	0	06	365-நாராயணசாமி நாயக்கர்	
623-2	7-3	4	2	00	0	1.50	0	06	823-அச்சய நாயக்கர், மற்றும் 3 நபர்(கள்)	
623-2	7-3	4	2	00	0	42.00	0	84	365-நாராயணசாமி நாயக்கர்	
623-2	7-3	4	2	00	0	46.50	0	93	989-நாராயணசாமி	
TOTAL FOR SURVEY NUMBER- 623						1	90.00	3	88	1.90.5
624	0-0	0	0	00	0	31.50	0	00		சிறீமதி சந்திரா சிவ
624	0-0	0	0	00	0	31.50	0	00		
TOTAL FOR SURVEY NUMBER- 624						2	63.00	0	00	
625-1	7-3	4	2	00	0	34.50	0	69	1007-ராமசாமி	
625-2	7-3	4	2	00	0	37.00	0	74	170-காபால்சாமி	
TOTAL FOR SURVEY NUMBER- 625						0	71.50	1	43	
626-1	0-0	0	0	00	0	22.50	0	00		சிறீமதி சந்திரா சிவ
626-1	0-0	0	0	00	0	22.50	0	00		
626-2	7-3	4	2	00	0	52.00	1	04	550-விநாயக மூர்த்தி	
TOTAL FOR SURVEY NUMBER- 626						0	97.00	1	04	



சிறீமதி சந்திரா சிவ
04/06/2025



2	3	4	5	6	7	8	9	10	11
23-1B	ர	4	...	7-3	4	2 00	0 17 5	0 35	493 ரா. ராமசுந்தரி நாயக்கர்.
-1C	ர	4	...	7-3	4	2 00	0 01.0	0 06	365 ரா. நாராயண சாமி நாயக்கர்.
-1D	ர	4	...	7-3	4	2 00	0 03.0	0 06	823 ரா. அச்சய நாயக்கர். மற்றும் முன்று பேர்களும்.
-1E	ர	4	...	7-3	4	2 00	0 28.5	0 58	12 ரா. அச்சய நாயக்கர்.
-1F	ர	4	...	7-3	4	2 10	0 29.5	0 58	493 ரா. ராமசுந்தரி நாயக்கர்.
-1G	ர	4	...	7-3	4	2 00	0 03 0	0 06	365 ரா. நாராயண சாமி நாயக்கர்.
-2A	ர	4	...	7-3	4	2 00	0 01.5	0 06	823 ரா. அச்சய நாயக்கர். மற்றும் முன்று பேர்களும்.
-2B	ர	4	...	7-3	4	2 00	0 41.0	0 84	365 ரா. நாராயண சாமி நாயக்கர்.
-2C	ர	4	...	7-3	4	2 00	0 46.5	0 93	38 ரா. அய்யப்ப நாயக்கர்.
624	சு	தி.ஏ.த	...	...	...	...	1 90.5	3 88	
625-பா	ர	4	...	7-3	4	2 00	0 34.5	0 69	384 கோ. பால கிருஷ்ண நாயக்கர்.
-பா	ர	4	...	7-3	4	2 00	0 37.0	0 74	170 கோ. கோபால் சாமி நாயக்கர்.
626-1	சு	4/த	...	...	...	...	0 71.5	1 43	
-2	ர	4	...	7-3	4	2 00	0 22.5	...	
							0 52.0	1 04	101 சு. கிருஷ்ண நாயக்கர்.
							0 74.5	1 04	

பகுதி பம்புகேட் சதுரக் கிணறு

சதுரக் கிணறு பம்புகேட்

திரைவ ஏற்பட்ட தகவல்.

— மூலக்கணிதம் —

04/09/25
101 சு. கிருஷ்ண நாயக்கர்.
கோபாலபுரம்
விருதுநகர்



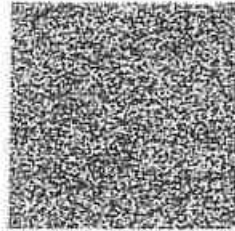
Government of India

Unique Identification Authority of India

உதேவ் எண் / Enrolment No.: 0013/79010/15565

To
கபில்தேவ் பாஸ்கரன்
Kabildev Baskaran
125/2,
TEACHER COLONY,
K R NAGAR(PO),
PUTHUPALAYAM,
VTC: Rajapalayam,
PO: Kumarasamy Raja Nagar,
Sub District: Rajapalayam,
District: Virudhunagar,
State: Tamil Nadu,
PIN Code: 626108,
Mobile: 8838898591

Signature valid



உங்கள் ஆதார் எண் / Your Aadhaar No. :

5865 8429 1039

VID : 9194 2504 3175 0223

எனது ஆதார். எனது அடையாளம்

Aadhaar No. Issued: 20/09/2013



கபில்தேவ் பாஸ்கரன்
Kabildev Baskaran
பிறந்த நாள்/DOB: 24/09/1996
ஆண்/ MALE

ஆதார் என்பது அடையாளத்திற்கான சான்றாகும். குடியரிமை அல்லது பிறந்த தேதிக்கான சான்றல்ல. பிறந்த தேதி என்பது ஆதார் எண் வைத்திருப்பவரால் சமர்ப்பிக்கப்பட்ட விதிமுறைகளில் குறிப்பிடப்பட்டுள்ள பிறந்த தேதி ஆவணத்தின் ஆதாரம் மூலம் ஆதரிக்கப்படும் தகவலின் அடிப்படையில் அமைந்துள்ளது.

Aadhaar is proof of Identity, not of citizenship or date of birth. It should be used with verification (online authentication, or scanning of QR code / offline XML).

5865 8429 1039

எனது ஆதார். எனது அடையாளம்



Government of India



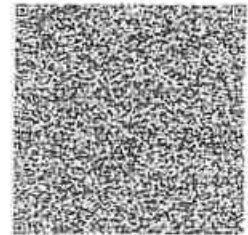
தகவல் / INFORMATION

- ஆதார் என்பது அடையாளத்திற்கான சான்றாகும். குடியரிமை அல்லது பிறந்த தேதிக்கான சான்றல்ல. பிறந்த தேதி என்பது ஆதார் எண் வைத்திருப்பவரால் சமர்ப்பிக்கப்பட்ட விதிமுறைகளில் குறிப்பிடப்பட்டுள்ள பிறந்த தேதி ஆவணத்தின் ஆதாரம் மூலம் ஆதரிக்கப்படும் தகவலின் அடிப்படையில் அமைந்துள்ளது.
- இந்த ஆதார் கடிதத்தை UIDAI நியமித்த அங்கீகார நிறுவனத்தால் ஆன்லைன் அங்கீகாரம் அல்லது ஆப் ஸ்கேனர்களில் கிடைக்கும் மம் ஆதார் அல்லது ஆதார் QR ஸ்கேனர் செயலியை பயன்படுத்தி ஓ குறியீடு ஸ்கேனில் அல்லது www.uidai.gov.in ல் கிடைக்கும் பாதுகாப்பான OR குறியீடு ரீடர் செயலியை பயன்படுத்தி சரிபார்க்க வேண்டும்.
- ஆதார் தனித்துவமானது மற்றும் பாதுகாப்பானது.
- ஆதார் பதிவு செய்யப்பட்ட நாளிலிருந்து ஒவ்வொரு 10 வருடங்களுக்குப் பிறகும் ஆதார் அடையாளம் மற்றும் முகவரிக்கான ஆவணங்கள் புதுப்பிக்கப்பட வேண்டும்.
- பல்வேறு அரசு மற்றும் அரசு சார்பு பலன்கள் / சேவைகளைப் பெற ஆதார் உங்களுக்கு உதவுகிறது.
- உங்கள் மொபைல் எண் மற்றும் மின்னஞ்சல் ஐடியை ஆதார்-ல் புதுப்பிக்கவும்.
- ஆதார் சேவைகளைப் பெற மொபைல் செயலியை பதிவிறக்கவும்.
- ஆதார்பயோமெட்ரிக்ஸைப் பயன்படுத்தாதபோது பாதுகாப்பை உறுதிசெய்ய, ஆதார்பயோமெட்ரிக்ஸ் லாக்/அன்லாக் அம்சத்தைப் பயன்படுத்தவும்.
- ஆதார் கோரும் நிறுவனங்கள் ஒப்புதலைப் பெற வேண்டிய கட்டாயம் உள்ளது.
- Aadhaar is proof of identity, not of citizenship or date of birth (DOB). DOB is based on information supported by proof of DOB document specified in regulations, submitted by Aadhaar number holder.
- This Aadhaar letter should be verified through either online authentication by UIDAI-appointed authentication agency or QR code scanning using mAadhaar or Aadhaar QR Scanner app available in app stores or using secure QR code reader app available on www.uidai.gov.in.
- Aadhaar is unique and secure.
- Documents to support identity and address should be updated in Aadhaar after every 10 years from date of enrolment for Aadhaar.
- Aadhaar helps you avail of various Government and Non-Government benefits/services.
- Keep your mobile number and email id updated in Aadhaar.
- Download mAadhaar app to avail of Aadhaar services.
- Use the feature of Lock/Unlock Aadhaar/biometrics to ensure security when not using Aadhaar/biometrics.
- Entities seeking Aadhaar are obligated to seek consent.



Unique Identification Authority of India

உதேவ் எண் / Enrolment No.: 0013/79010/15565
125/2, ஆசிரியர் குடியிருப்பு, கே ஆர் நகர்(பி), புதுப்பாளையம், ராஜாபாளையம், குமாரசாமி ராஜ நகர், விருதுநகர், தமிழ்நாடு - 626108
Address:
125/2, TEACHER COLONY, K R NAGAR(PO), PUTHUPALAYAM, Rajapalayam, PO: Kumarasamy Raja Nagar, DIST: Virudhunagar, Tamil Nadu - 626108



5865 8429 1039

VID : 9194 2504 3175 0223

1847 | help@uidai.gov.in | www.uidai.gov.in

आयकर विभाग
INCOME TAX DEPARTMENT



भारत सरकार
GOVT. OF INDIA



प्राथमिक लेखा संख्या कार्ड
PRIMAERY ACCOUNT NUMBER CARD

FIYPK3506G

नाम Name
KABIR DOL

पिता का नाम Father's Name
BAJIRAM

कार्ड को सक्रिय करने का दिनांक
24/09/1988

हस्ताक्षर Signature

10052017

इस कार्ड को खोने / पाने पर कृपया सूचित करें / सूचित करें:
आयकर पेन सेवा इकाई, एनएसडीएल
5वीं मंजिल, मेन्ट्री स्टर्लिंग, प्लॉट नं. 341, सर्वे नं. 597/8,
मॉडल कॉलोनी, दीप बंगला चौक के पास,
पुणे - 411 016.

If this card is lost / someone's lost card is found,
please inform / return to :

Income Tax PAN Services Unit, NSDL
5th floor, Mentri Sterling,
Plot No. 341, Survey No. 597/8,
Model Colony, Near Deep Bunglow Chowk,
Pune - 411 016.

Tel: 91-20-2721 8081, Fax: 91-20-2721 8081
e-mail: tininfo@nsdl.co.in



CHETTINAD CEMENT CORPORATION LTD.,

(Regd. Office: RANI SEETHAI HALL BUILDING IV & V FLOORS, 803, ANNA SALAI, MADRAS-600006.)

WORKS OFFICE: PULIYUR.

TELE: PHONE 21144 KARUR
22744
21748
GRAM "CEMENT" Puliur C.F.
Telex: 0458-216.
STD Code: 04324

All Correspondences to
Kumararajah Muthiah Nagar,
PULIYUR CEMENT FACTORY POST 639114
(Karur Taluk, Trichy DL)

T.RAJU., B.E.,
MINES MANAGER & DY. GENERAL MANAGER.

**CERTIFICATE.**

This is to certify that Mr.C.Natarajan has been working as a Geologist from 14-12-1979 to till date. He has been incharge of supervision of day to day functions in respect of Exploration, Preparation of Geological Plans & Sections, Preparation of Mines Plans, and Quality control and other allied mining activities in the following Pits of our Seethainagar Limestone Mines in Anna District.

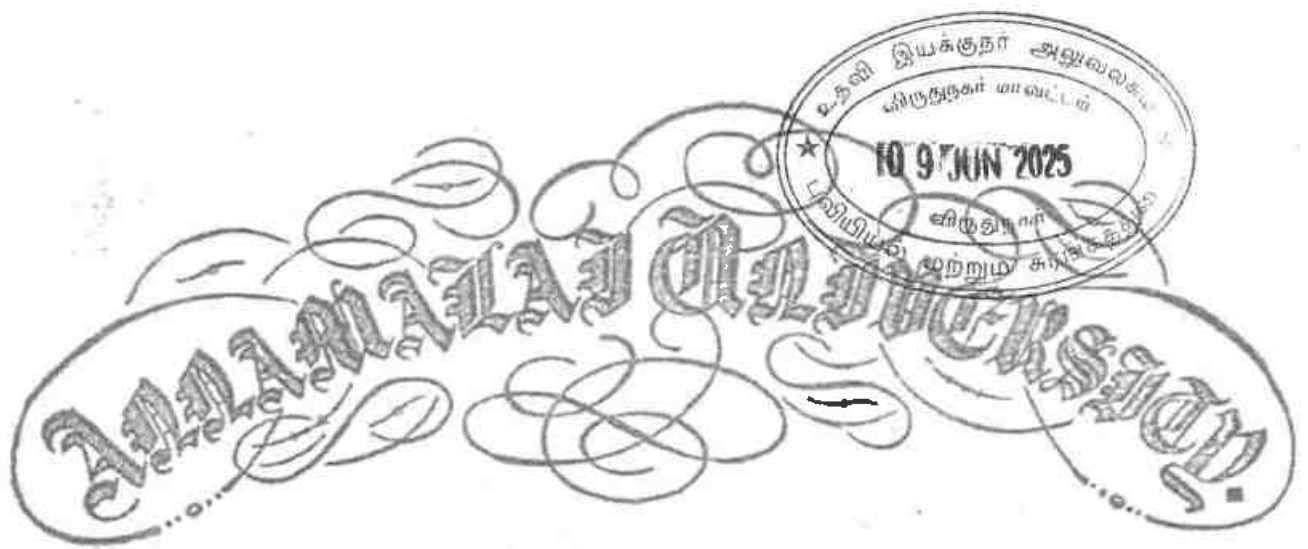
<u>Name of the Pit.</u>	<u>Average Raising/day.</u>
1. Alambadi Pit.	- 1,700 T.
2. Mallapuram Pit.	- 900 T.
3. Karikkali Pit.	- 150 T.
Total.	- 2,750 T.

He has got nearly Eight years of total experience in our Mines in the above supervisory capacity.

for CHETTINAD CEMENT CORPORATION LTD.,

(T.RAJU).

Mines Manager & Dy. General Manager.



Faculty of Science

The Senate of the Annamalai University hereby makes known that E. Natarajan has been admitted to the Degree of Master of Science (by Examination) in Geology, he having been certified by duly appointed Examiners at the examination held in April, 1976, to be qualified to receive the same and that he was placed in the First Class.

Given under the seal of the University.

Annamalainagar

24th December, 1976.

A. Chandrasekhar
Vice-Chancellor.

09°21'17.96"N

77°36'36.59"E

77°36'42.09"E

09°21'12.93"N



PLATE NO-I

DATE OF SURVEY : 17.05.2023

APPLICANT:

THIRU.B.KABILDEV,

S/O.BASKARAN,

NO.125/2, TEACHERS COLONY,

K.R.NAGAR (POST),

PUTHUPALAYAM,

RAJAPALAYAM TALUK,

VIRUDHUNAGAR DISTRICT.

QUARRY APPLIED LEASE AREA:

S.F.NO's : 623/1C, 623/1D, 623/1G, 623/2A,

623/2B, 623/2C, 623/1A, 623/1B,

623/1E & 623/1F,

EXTENT : 1.90.50 Ha,

VILLAGE: GOPALAPURAM,

TALUK : VEMBAKOTTAI,

DISTRICT : VIRUDHUNAGAR.

INDEX

Q. L. APPLIED AREA : ●

TOPO SHEET NO : 58 G/ 11

LATITUDE : 09°21'12.93"N TO 09°21'17.96"N

LONGITUDE : 77°36'36.59"E TO 77°36'42.09"E

LOCATION PLAN

NOT TO SCALE

PREPARED BY :

THIS IS TO CERTIFY THAT THE INFORMATION
IN THIS PLATE IS TRUE AND CORRECT TO
THE BEST OF MY KNOWLEDGE BASED UPON
THE LEASE MAP AUTHENTICATED BY STATE
GOVERNMENT

C.NATARAJAN
M.Phil.
QUALIFIED PERSON

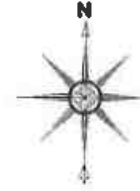
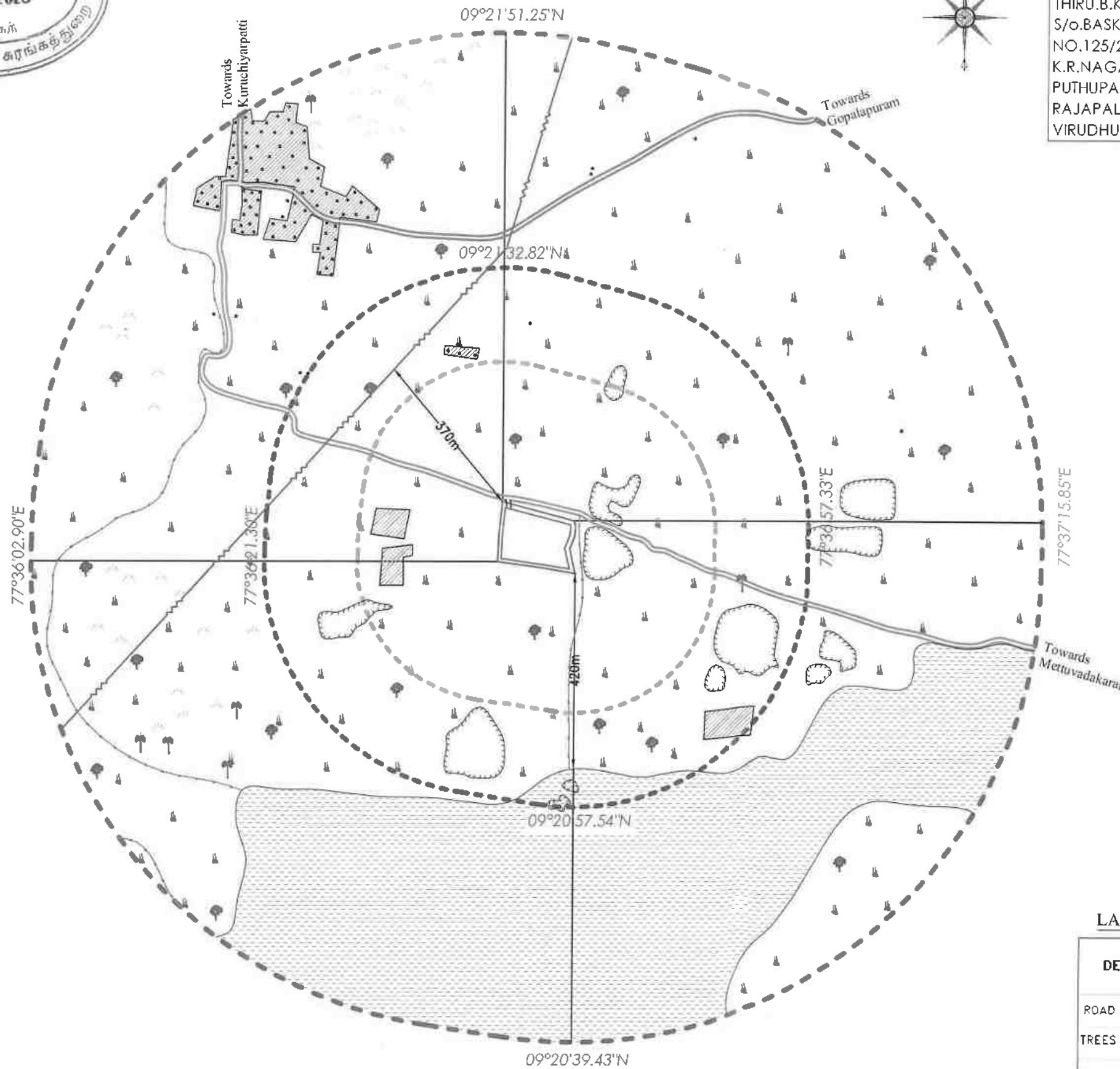


PLATE NO-IA
DATE OF SURVEY : 17.05.2025

APPLICANT:
THIRU.B.KABILDEV,
S/o.BASKARAN,
NO.125/2, TEACHERS COLONY,
K.R.NAGAR (POST),
PUTHUPALAYAM,
RAJAPALAYAM TALUK,
VIRUDHUNAGAR DISTRICT.

QUARRY APPLIED LEASE AREA:
S.F.NO's : 623/1C, 623/1D, 623/1G, 623/2A,
623/2B, 623/2C, 623/1A, 623/1B,
623/1E & 623/1F,
EXTENT : 1.90.50 Ha,
VILLAGE : GOPALAPURAM,
TALUK : VEMBAKOTTAI,
DISTRICT : VIRUDHUNAGAR.

INDEX
TOPO SHEET NO : 58 G/ 11
LATITUDE : 09°21'12.93"N TO 09°21'17.96"N
LONGITUDE : 77°36'36.59"E TO 77°36'42.09"E

Q.L.APPLIED AREA	
7.5m & 10m SAFETY DISTANCE	
300M RADIUS	
500M RADIUS	
1KM RADIUS	
APPROACH ROAD	
CART TRACK	
VILLAGE ROAD	
BARREN LAND	
TREES	
SEASONAL AGRICULTURE	
HABITATIONS	
ODAI	
CRUSHER	
QUARRY PIT	
HT LINE	
TANK	

LAND USE PATTERN

DESCRIPTION	AREA IN (%)
ROAD	03
TREES	10
BARREN LAND	44
HABITATIONS	10
WATER BODIES	25
AGRICULTURE LAND	08

ENVIRONMENTAL PLAN

SCALE 1: 10,000

PREPARED BY :
THIS IS TO CERTIFY THAT THE INFORMATION
IN THIS PLATE IS TRUE AND CORRECT TO
THE BEST OF MY KNOWLEDGE BASED UPON
THE LEASE MAP AUTHENTICATED BY STATE
GOVERNMENT

C.NATARAJAN, M.Sc., M.Phil.,
QUALIFIED PERSON

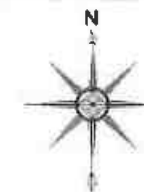


PLATE NO-IB

DATE OF SURVEY : 17.05.2025

APPLICANT:

THIRU.B.KABILDEV,
S/o.BASKARAN,
NO.125/2, TEACHERS COLONY,
K.R.NAGAR (POST),
PUTHUPALAYAM,
RAJAPALAYAM TALUK,
VIRUDHUNAGAR DISTRICT.

QUARRY APPLIED LEASE AREA:

S.F.NO's : 623/1C, 623/1D, 623/1G, 623/2A,
623/2B, 623/2C, 623/1A, 623/1B,
623/1E & 623/1F,

EXTENT : 1.90.50 Ha,

VILLAGE : GOPALAPURAM,

TALUK : VEMBAKOTTAI,

DISTRICT : VIRUDHUNAGAR.

INDEX

TOPO SHEET NO : 58 G/ 11

LATITUDE : 09°21'12.93"N TO 09°21'17.96"N

LONGITUDE : 77°36'36.59"E TO 77°36'42.09"E

Q.L.APPLIED AREA	
7.5m & 10m SAFETY DISTANCE	
300M RADIUS	
500M RADIUS	
1KM RADIUS	
APPROACH ROAD	
CART TRACK	
VILLAGE ROAD	

SATELLITE IMAGERY MAP

SCALE 1: 10,000

PREPARED BY :

THIS IS TO CERTIFY THAT THE INFORMATION
IN THIS PLATE IS TRUE AND CORRECT TO
THE BEST OF MY KNOWLEDGE BASED UPON
THE LEASE MAP AUTHENTICATED BY STATE
GOVERNMENT

C.NATARAJAN,M.Sc.,M.Phil.,
QUALIFIED PERSON

KEY PLAN

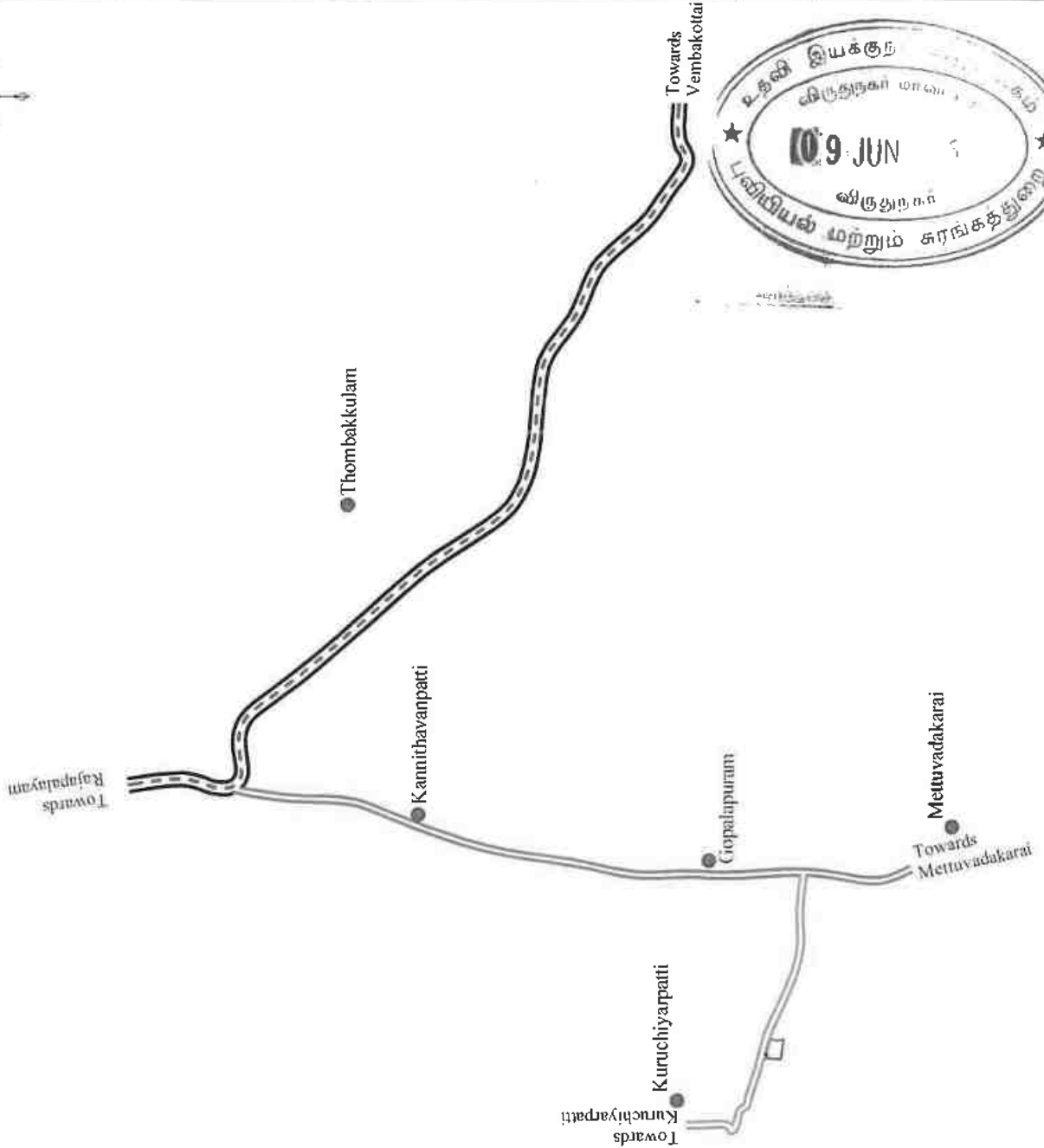
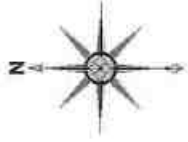


PLATE NO-ID
DATE OF SURVEY : 17.05.2025

APPLICANT:
THIRU.B.KABILDEV,
S/O.BASKARAN,
NO.125/2, TEACHERS COLONY,
K.R.NAGAR (POST),
PUTHUPALAYAM,
RAJAPALAYAM TALUK,
VIRUDHUNAGAR DISTRICT.

QUARRY APPLIED LEASE AREA:
S.F.NO's : 623/1C, 623/1D, 623/1G, 623/2A,
623/2B, 623/2C, 623/1A, 623/1B,
623/1E & 623/1F,
EXTENT : 1.90.50 Ha,
VILLAGE : GOPALAPURAM,
TALUK : VEMBAKOTTAI,
DISTRICT : VIRUDHUNAGAR.

INDEX

Q.L.APPLIED AREA	
APPROACH ROAD	
CART TRACK	
VILLAGE ROAD	
STATE HIGHWAY	
HABITATIONS	

KEY PLAN

Not To Scale

PREPARED BY:

THIS IS TO CERTIFY THAT THE INFORMATION
IN THIS PLATE IS TRUE AND CORRECT TO
THE BEST OF MY KNOWLEDGE BASED UPON
THE LEASE MAP AUTHENTICATED BY STATE

GOVERNMENT

C.NATARAJAN, M.Sc., M.Phil.,
QUALIFIED PERSON

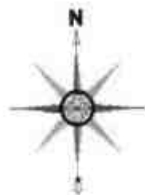


PLATE NO-II

DATE OF SURVEY : 17.05.2025

APPLICANT:

THIRU.B.KABILDEV,
S/o.BASKARAN,
NO.125/2, TEACHERS COLONY,
K.R.NAGAR (POST),
PUTHUPALAYAM,
RAJAPALAYAM TALUK,
VIRUDHUNAGAR DISTRICT.

QUARRY APPLIED LEASE AREA:

S.F.NO's : 623/1C, 623/1D, 623/1G, 623/2A,
623/2B, 623/2C, 623/1A, 623/1B,
623/1E & 623/1F,

EXTENT : 1.90.50 Ha,
VILLAGE : GOPALAPURAM,
TALUK : VEMBAKOTTAI,
DISTRICT : VIRUDHUNAGAR.

INDEX

- Q.L. APPLIED BOUNDARY
- 7.5m & 10m SAFETY DISTANCE
- TEMPORARY BENCH MARK
- APPROACH ROAD
- CART TRACK
- CONTOUR
- SCRUB

QUARRY LEASE & SURFACE PLAN

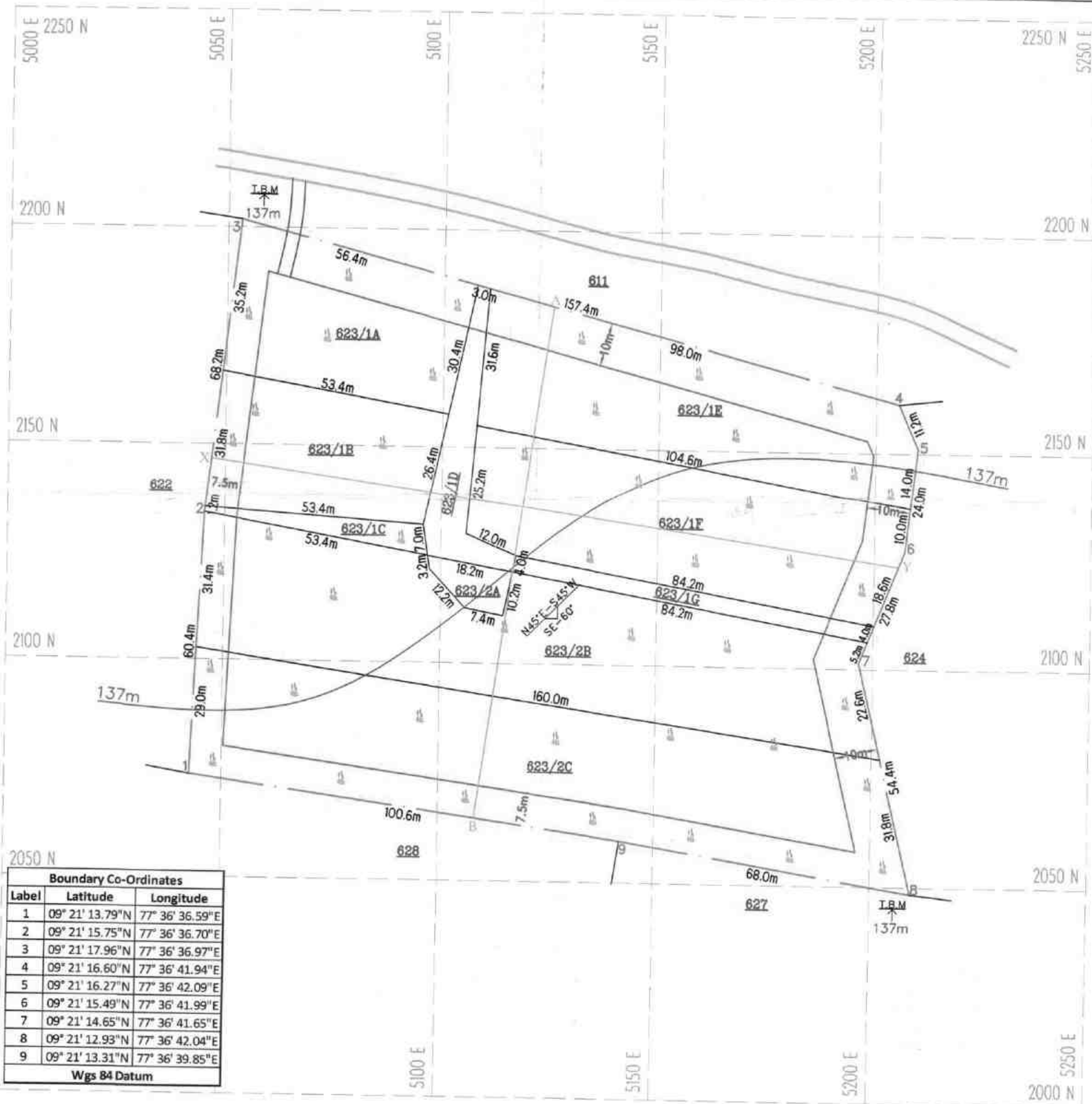
SCALE 1 : 1000

PREPARED BY:

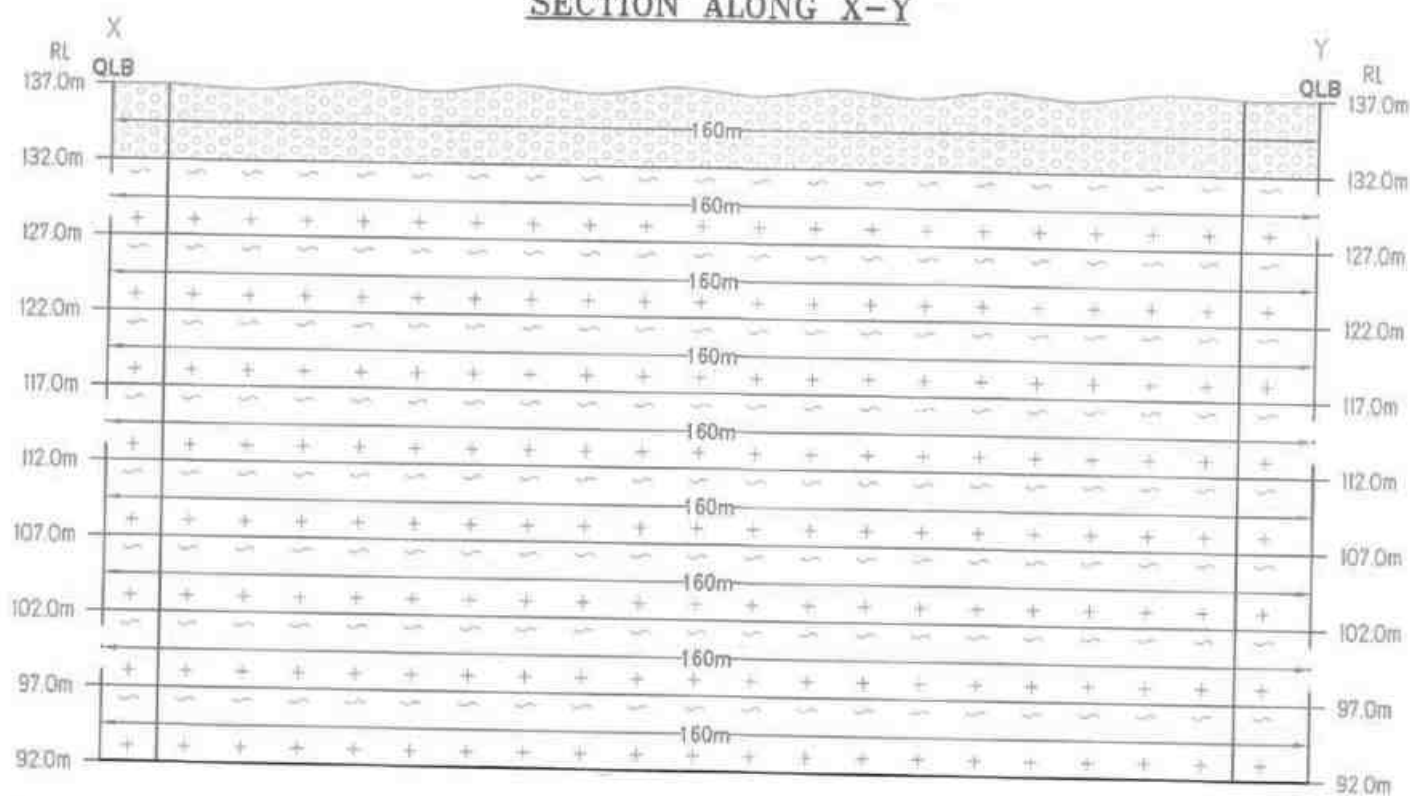
THIS IS TO CERTIFY THAT THE INFORMATION
IN THIS PLATE IS TRUE AND CORRECT TO
THE BEST OF MY KNOWLEDGE BASED UPON
THE LEASE MAP AUTHENTICATED BY STATE
GOVERNMENT

C.NATARAJAN, M.Sc., M.Phil.,
QUALIFIED PERSON

Boundary Co-Ordinates		
Label	Latitude	Longitude
1	09° 21' 13.79"N	77° 36' 36.59"E
2	09° 21' 15.75"N	77° 36' 36.70"E
3	09° 21' 17.96"N	77° 36' 36.97"E
4	09° 21' 16.60"N	77° 36' 41.94"E
5	09° 21' 16.27"N	77° 36' 42.09"E
6	09° 21' 15.49"N	77° 36' 41.99"E
7	09° 21' 14.65"N	77° 36' 41.65"E
8	09° 21' 12.93"N	77° 36' 42.04"E
9	09° 21' 13.31"N	77° 36' 39.85"E
Wgs 84 Datum		



SECTION ALONG X-Y



SECTION ALONG A-B

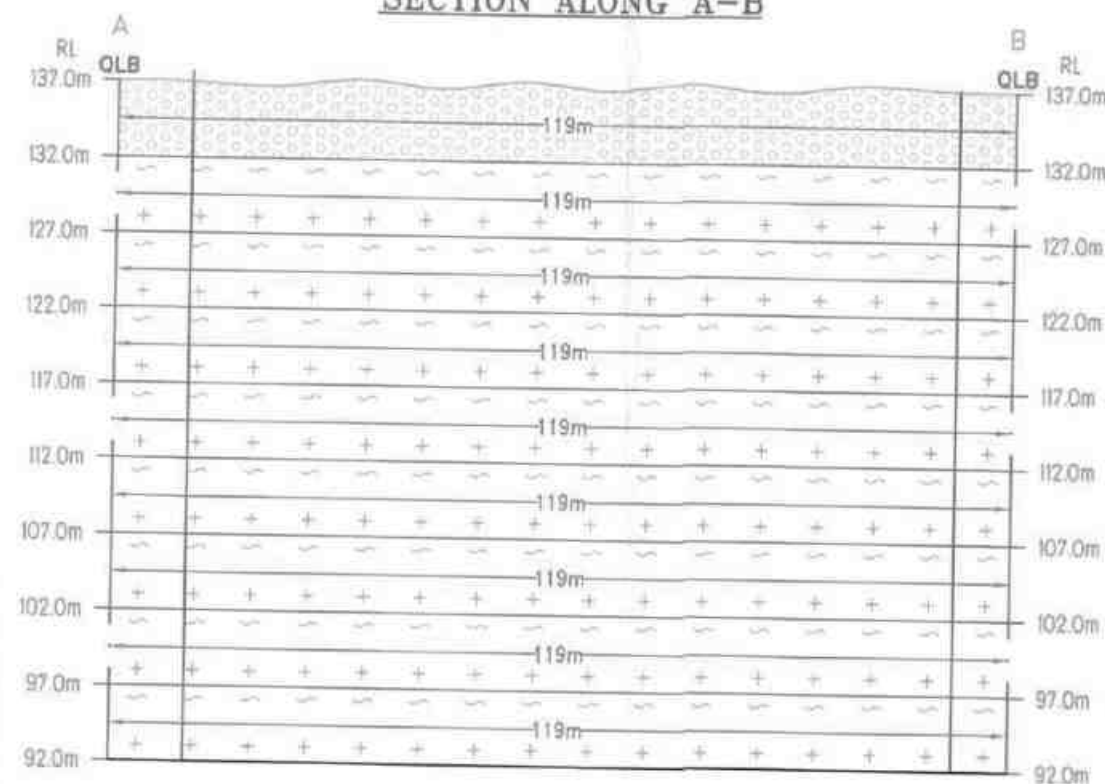


PLATE NO-III
DATE OF SURVEY : 17.05.2025

APPLICANT:
THIRU.B.KABILDEV,
S/o.BASKARAN,
NO.125/2, TEACHERS COLONY,
K.R.NAGAR (POST),
PUTHUPALAYAM,
RAJAPALAYAM TALUK,
VIRUDHUNAGAR DISTRICT.

QUARRY APPLIED LEASE AREA:
S.F.NO's : 623/1C, 623/1D, 623/1G, 623/2A,
623/2B, 623/2C, 623/1A, 623/1B,
623/1E & 623/1F,
EXTENT : 1.90.50 Ha,
VILLAGE : GOPALAPURAM,
TALUK : VEMBAKOTTAI,
DISTRICT : VIRUDHUNAGAR.

INDEX

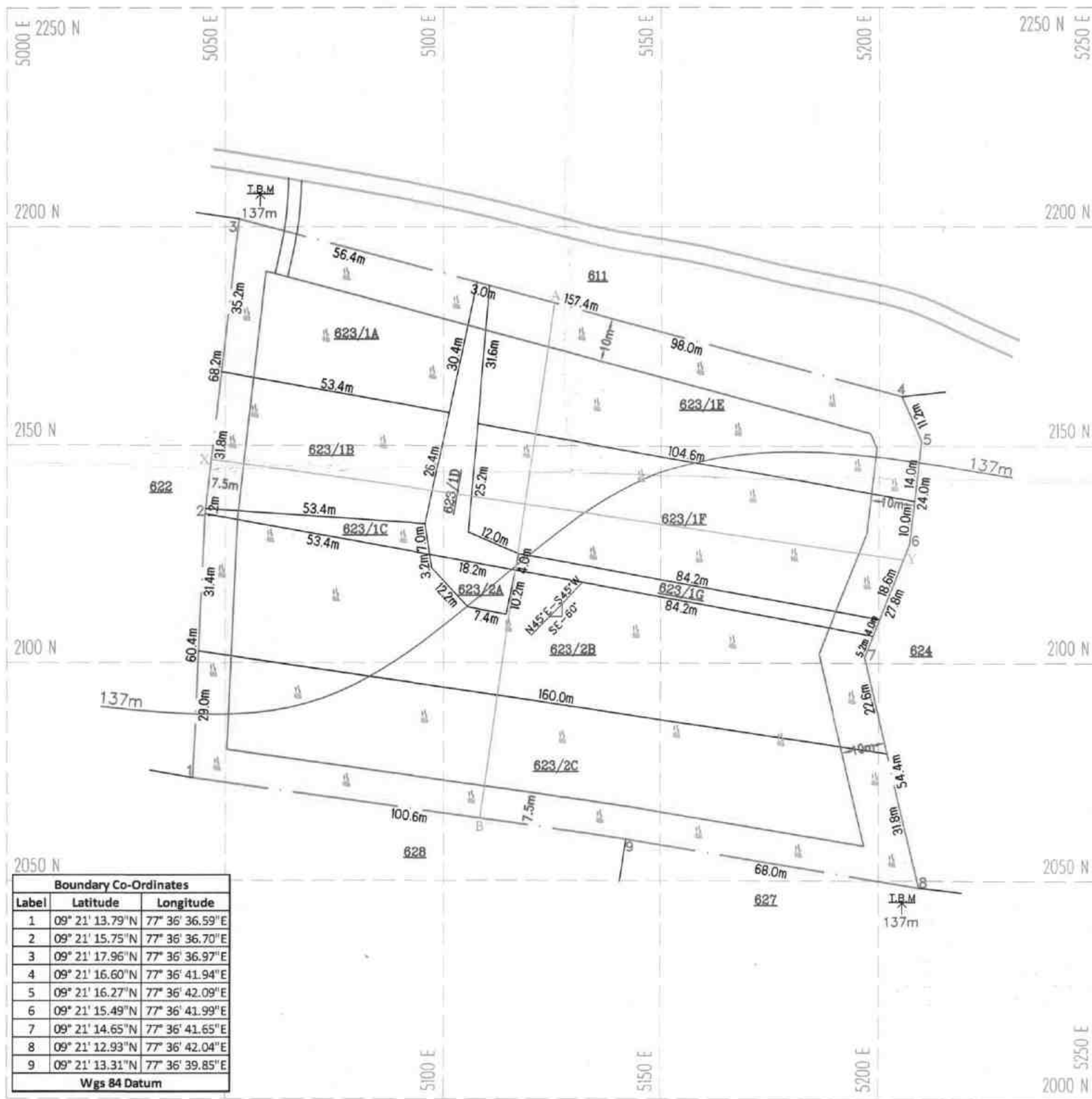
Q.L. APPLIED BOUNDARY	
7.5m & 10m SAFETY DISTANCE	
TEMPORARY BENCH MARK	
APPROACH ROAD	
CART TRACK	
CONTOUR	
SCRUB	
GRAVEL	
ROUGH STONE	
STRIKE & DIP	

TOPOGRAPHY, GEOLOGICAL PLAN & SECTIONS

SCALE 1 : 1000
SECTIONS HOR 1:1000, VER 1:500

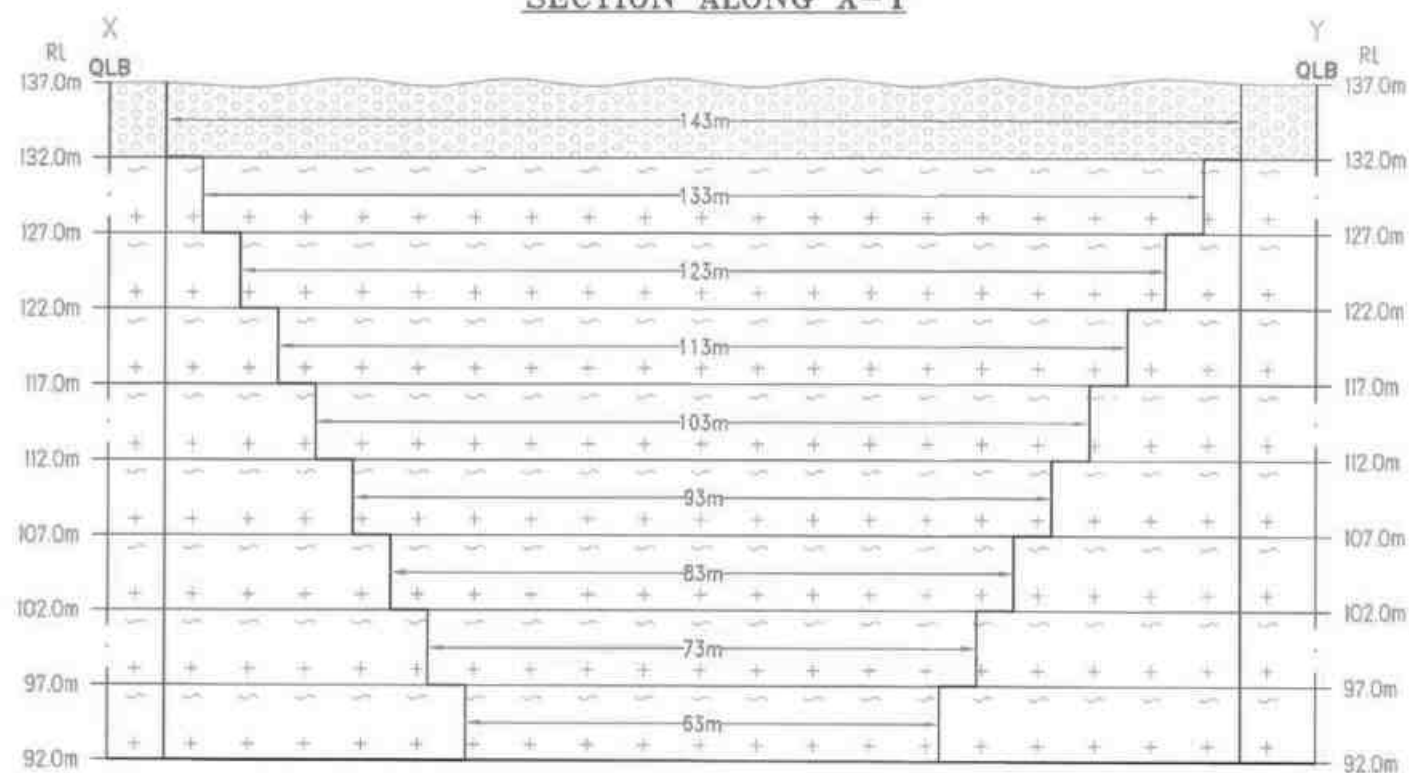
PREPARED BY:
THIS IS TO CERTIFY THAT THE INFORMATION
IN THIS PLATE IS TRUE AND CORRECT TO
THE BEST OF MY KNOWLEDGE BASED UPON
THE LEASE MAP AUTHENTICATED BY STATE
GOVERNMENT

C.NATARAJAN, M.Sc., M.Phil.,
QUALIFIED PERSON



Boundary Co-Ordinates		
Label	Latitude	Longitude
1	09° 21' 13.79"N	77° 36' 36.59"E
2	09° 21' 15.75"N	77° 36' 36.70"E
3	09° 21' 17.96"N	77° 36' 36.97"E
4	09° 21' 16.60"N	77° 36' 41.94"E
5	09° 21' 16.27"N	77° 36' 42.09"E
6	09° 21' 15.49"N	77° 36' 41.99"E
7	09° 21' 14.65"N	77° 36' 41.65"E
8	09° 21' 12.93"N	77° 36' 42.04"E
9	09° 21' 13.31"N	77° 36' 39.85"E
Wgs 84 Datum		

SECTION ALONG X-Y



SECTION ALONG A-B

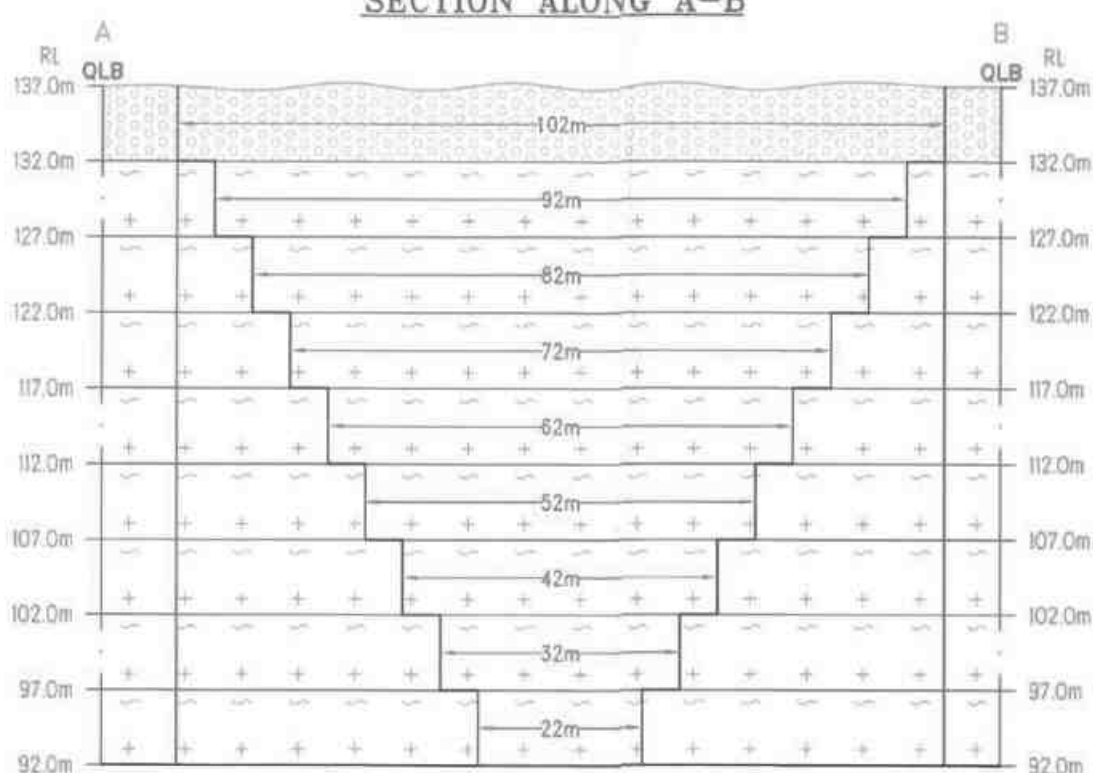


PLATE NO-IV
DATE OF SURVEY : 17.05.2025

APPLICANT:
THIRU.B.KABILDEV,
S/o.BASKARAN,
NO.125/2, TEACHERS COLONY,
K.R.NAGAR (POST),
PUTHUPALAYAM,
RAJAPALAYAM TALUK,
VIRUDHUNAGAR DISTRICT.

QUARRY APPLIED LEASE AREA:
S.F.NO's : 623/1C, 623/1D, 623/1G, 623/2A,
623/2B, 623/2C, 623/1A, 623/1B,
623/1E & 623/1F,
EXTENT : 1.90.50 Ha,
VILLAGE : GOPALAPURAM,
TALUK : VEMBAKOTTAI,
DISTRICT : VIRUDHUNAGAR.

INDEX

Q.L. APPLIED BOUNDARY	
7.5m & 10m SAFETY DISTANCE	
TEMPORARY BENCH MARK	
APPROACH ROAD	
CART TRACK	
CONTOUR	
SCRUB	
GRAVEL	
ROUGH STONE	
STRIKE & DIP	

MINEABLE PLAN & SECTIONS

SCALE 1 : 1000
SECTIONS HOR 1:1000, VER 1:500

PREPARED BY:
THIS IS TO CERTIFY THAT THE INFORMATION
IN THIS PLATE IS TRUE AND CORRECT TO
THE BEST OF MY KNOWLEDGE BASED UPON
THE LEASE MAP AUTHENTICATED BY STATE
GOVERNMENT

C.NATARAJAN, M.Sc.M.Phil,
QUALIFIED PERSON

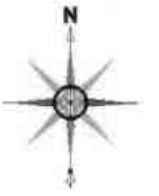
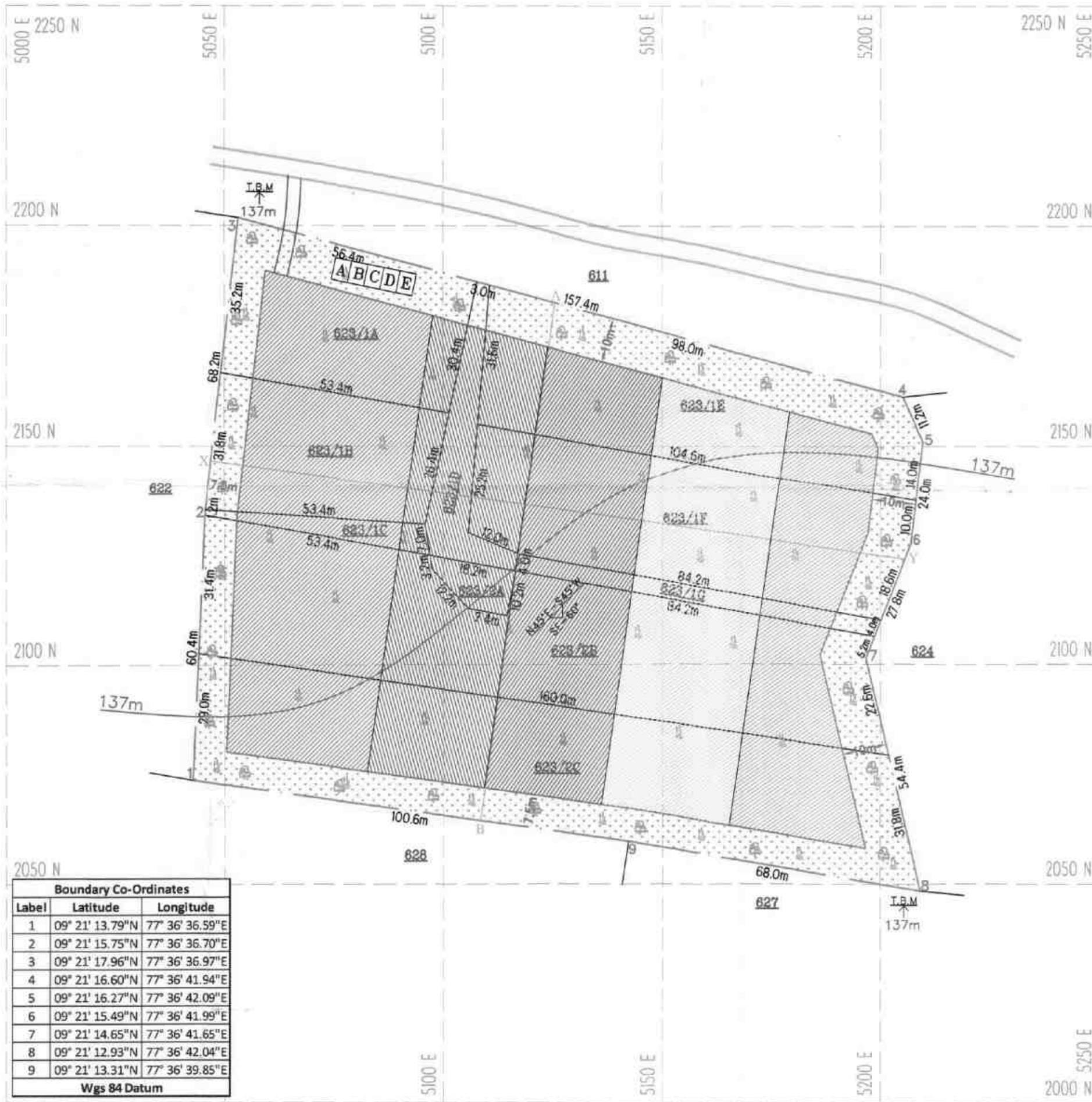


PLATE NO-V
DATE OF SURVEY : 17.05.2025

APPLICANT:
THIRU.B.KABILDEV,
S/o.BASKARAN,
NO.125/2, TEACHERS COLONY,
K.R.NAGAR (POST),
PUTHUPALAYAM,
RAJAPALAYAM TALUK,
VIRUDHUNAGAR DISTRICT.

QUARRY APPLIED LEASE AREA:
S.F.NO's : 623/1C, 623/1D, 623/1G, 623/2A,
623/2B, 623/2C, 623/1A, 623/1B,
623/1E & 623/1F,
EXTENT : 1.90.50 Ha,
VILLAGE : GOPALAPURAM,
TALUK : VEMBAKOTTAI,
DISTRICT : VIRUDHUNAGAR.

INDEX

Q.L. APPLIED BOUNDARY	
7.5m & 10m SAFETY DISTANCE	
TEMPORARY BENCH MARK	
APPROACH ROAD	
CART TRACK	
CONTOUR	
SCRUB	
GRAVEL	
ROUGH STONE	
STRIKE & DIP	

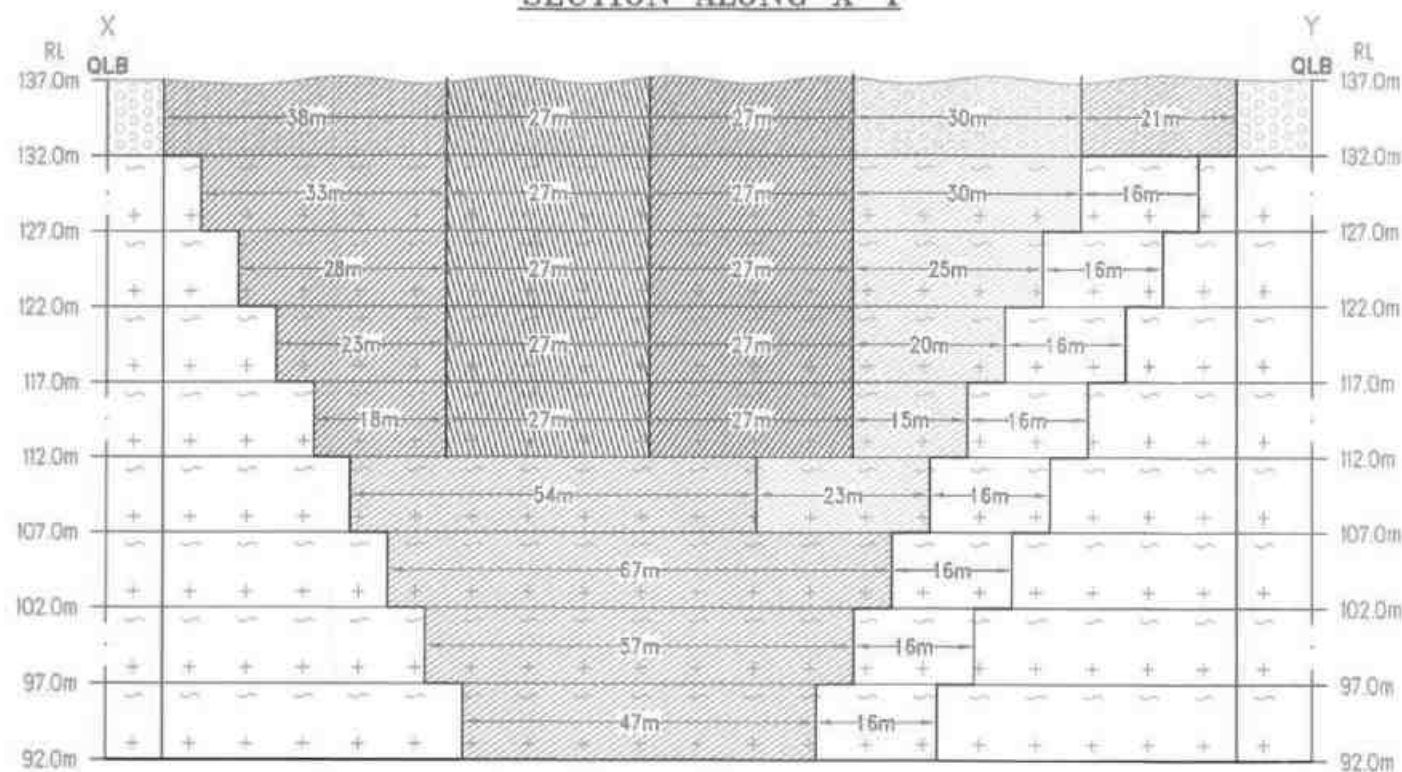
YEARWISE DEVELOPMENT & PRODUCTION PLAN & SECTIONS

SCALE 1 : 1000
SECTIONS HOR 1:1000, VER 1:500

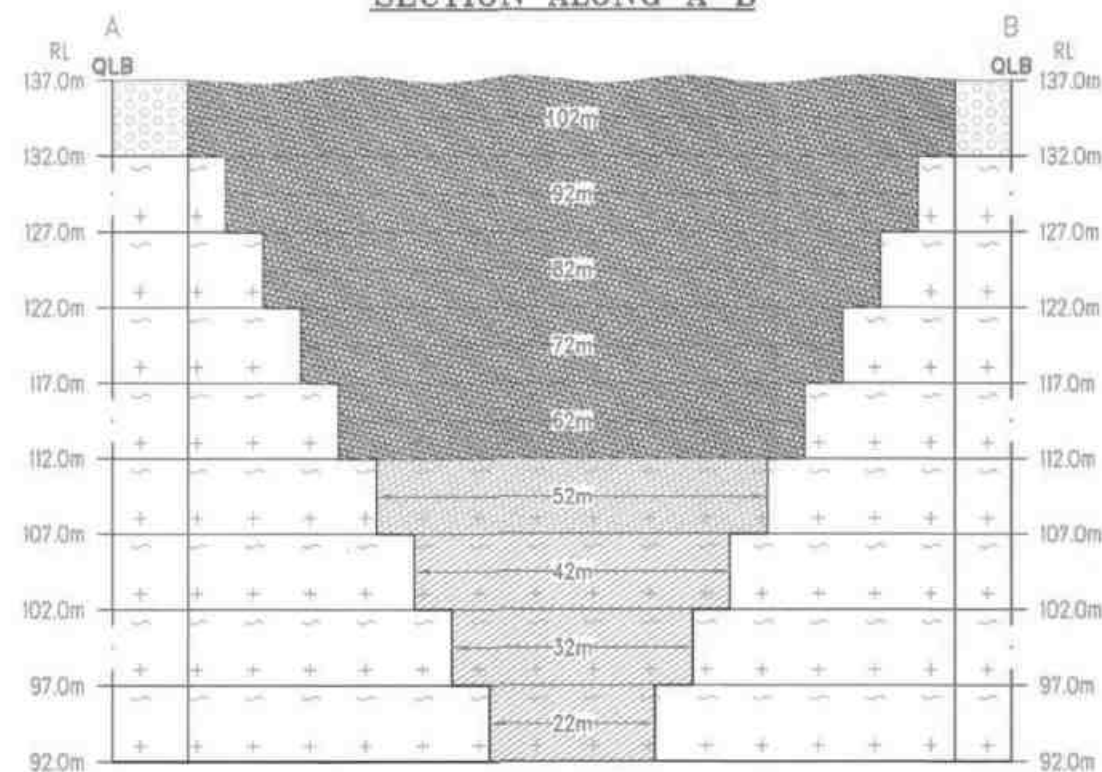
PREPARED BY:
THIS IS TO CERTIFY THAT THE INFORMATION
IN THIS PLATE IS TRUE AND CORRECT TO
THE BEST OF MY KNOWLEDGE BASED UPON
THE LEASE MAP AUTHENTICATED BY STATE
GOVERNMENT

C.NATARAJAN M.Sc., M.Phil,
QUALIFIED PERSON

SECTION ALONG X-Y



SECTION ALONG A-B



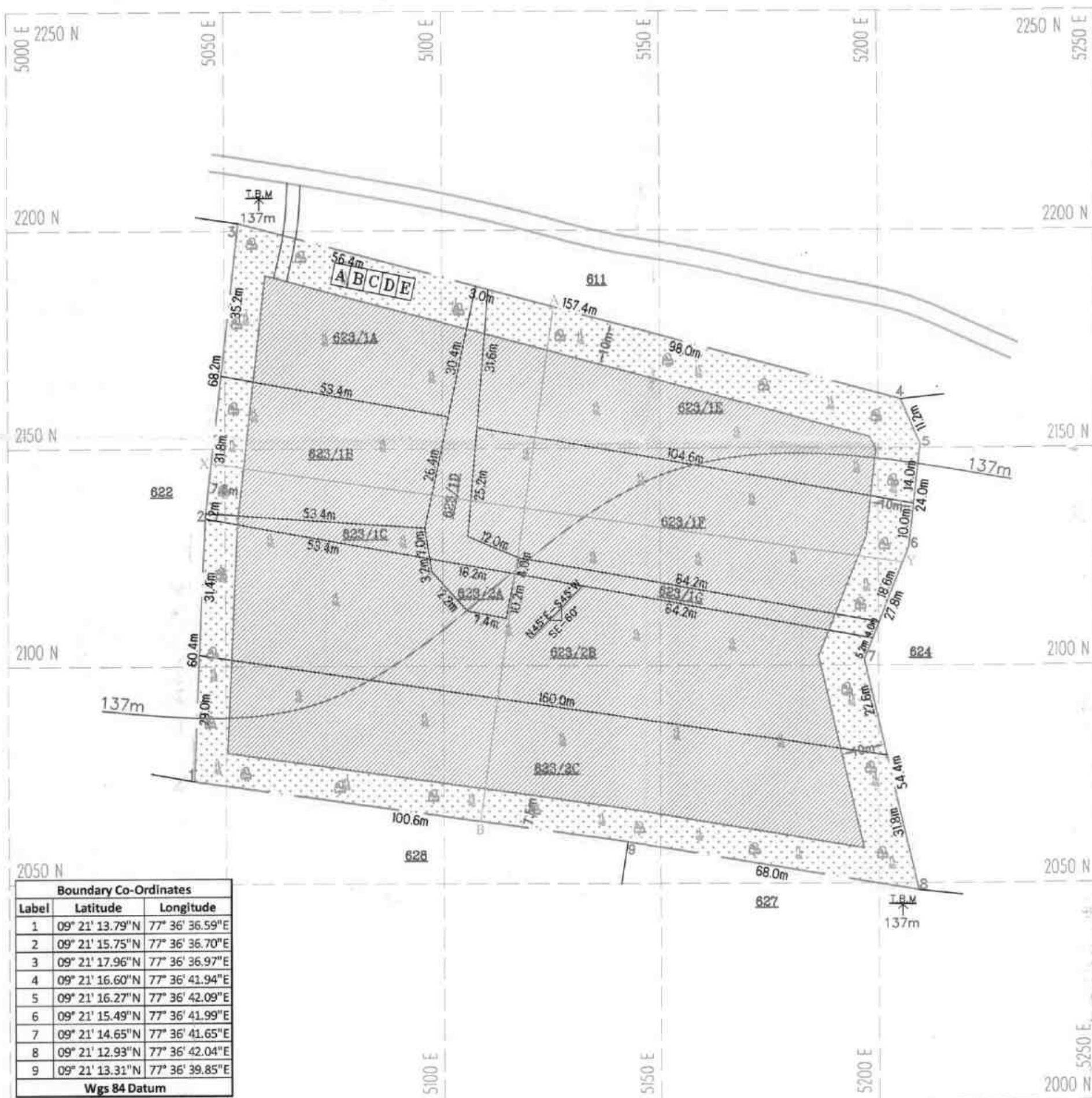


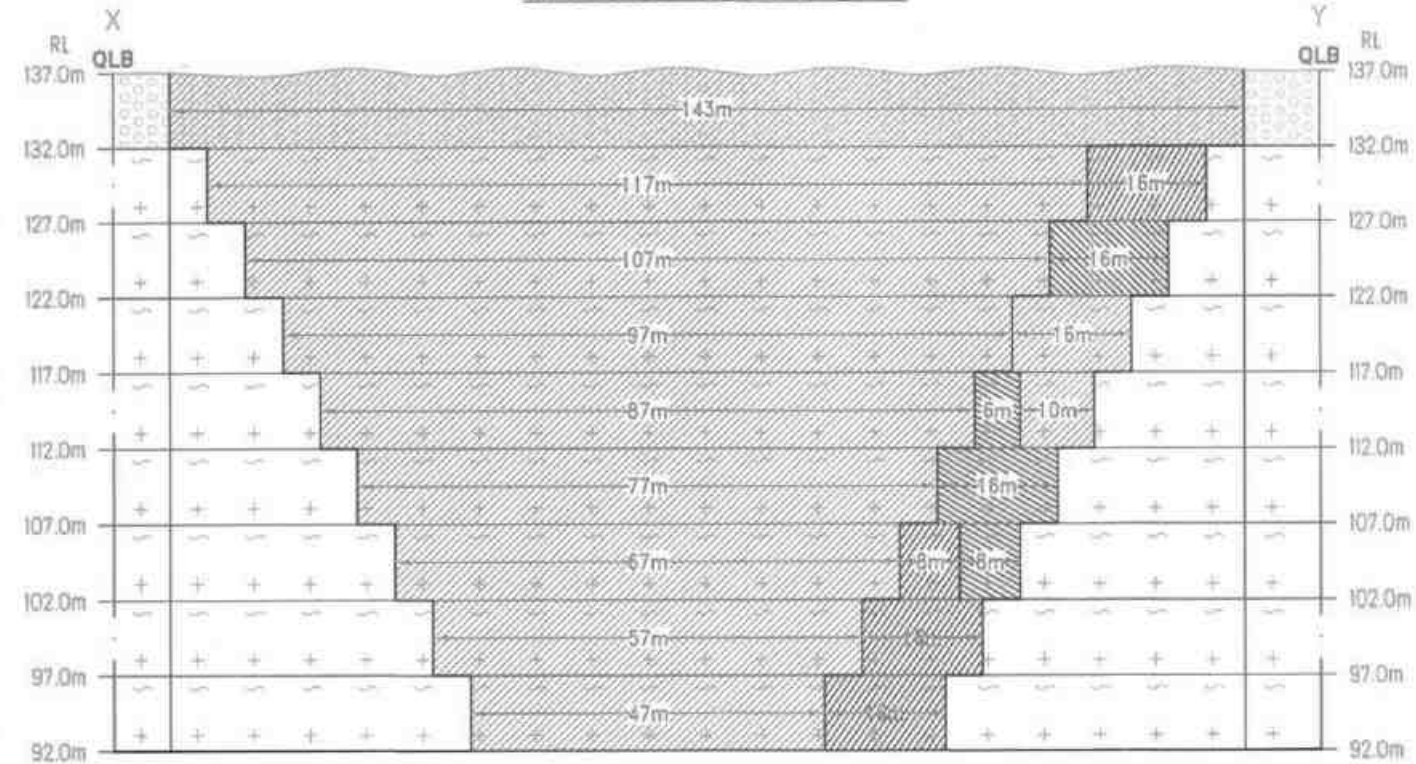
PLATE NO-VA
DATE OF SURVEY : 17.05.2025

APPLICANT:
THIRU.B.KABILDEV,
S/o.BASKARAN,
NO.125/2, TEACHERS COLONY,
K.R.NAGAR (POST),
PUTHUPALAYAM,
RAJAPALAYAM TALUK,
VIRUDHUNAGAR DISTRICT.

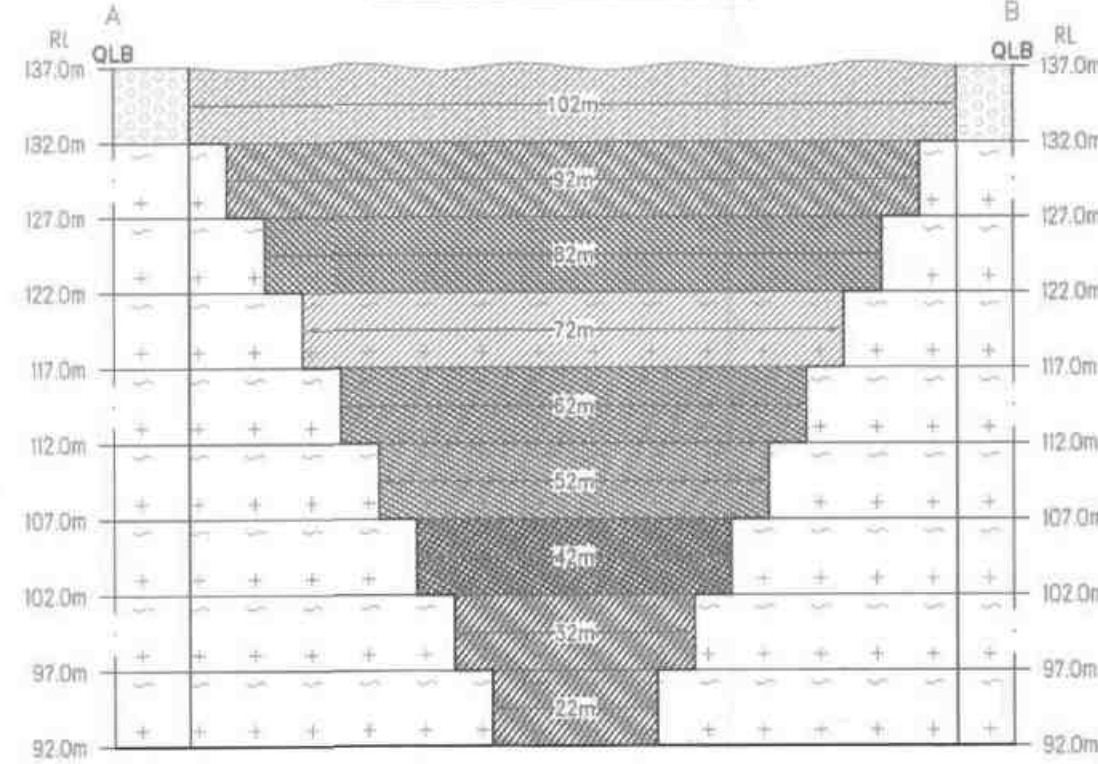
QUARRY APPLIED LEASE AREA:
S.F.NO's : 623/1C, 623/1D, 623/1G, 623/2A,
623/2B, 623/2C, 623/1A, 623/1B,
623/1E & 623/1F,
EXTENT : 1.90.50 Ha,
VILLAGE : GOPALAPURAM,
TALUK : VEMBAKOTAI,
DISTRICT : VIRUDHUNAGAR.

INDEX	
Q.L. APPLIED BOUNDARY	
7.5m & 10m SAFETY DISTANCE	
TEMPORARY BENCH MARK	
APPROACH ROAD	
CART TRACK	
CONTOUR	
SCRUB	
GRAVEL	
ROUGH STONE	
STRIKE & DIP	

SECTION ALONG X-Y



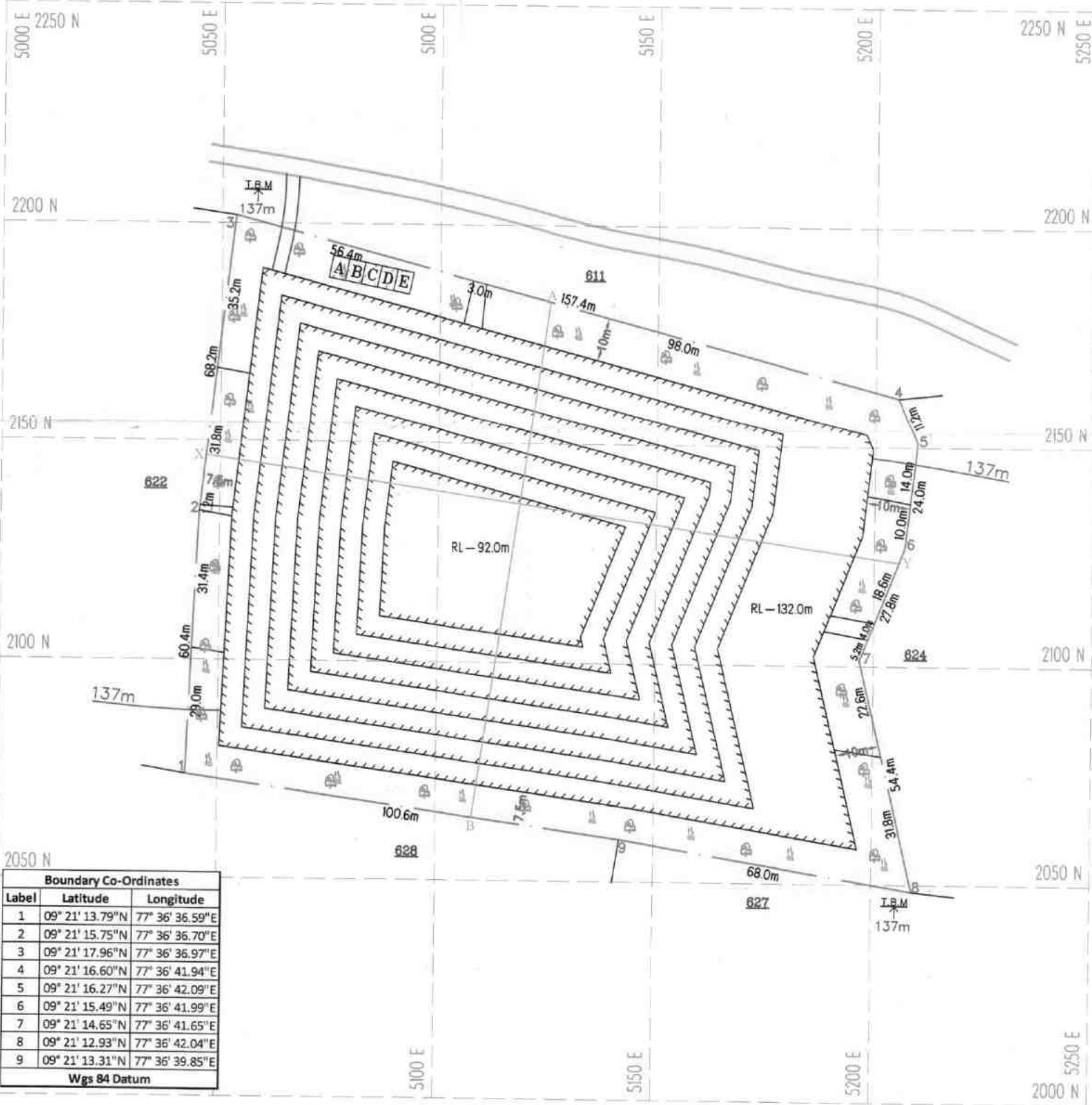
SECTION ALONG A-B



**SECOND FIVE YEARWISE
DEVELOPMENT & PRODUCTION
PLAN & SECTIONS**
SCALE 1 : 1000
SECTIONS HOR 1:1000, VER 1:500

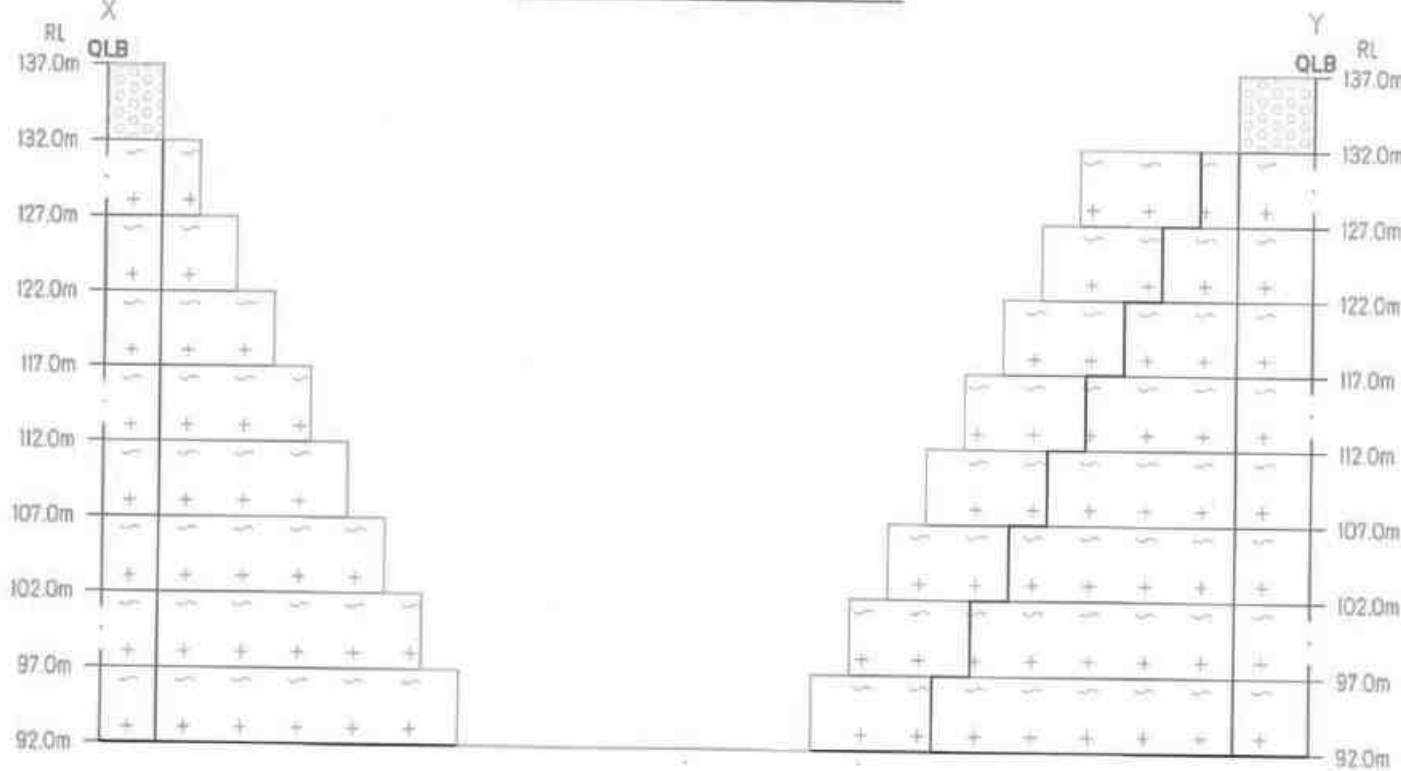
PREPARED BY:
THIS IS TO CERTIFY THAT THE INFORMATION
IN THIS PLATE IS TRUE AND CORRECT TO
THE BEST OF MY KNOWLEDGE BASED UPON
THE LEASE MAP AUTHENTICATED BY STATE
GOVERNMENT

C.NATARAJAN, M.Sc., M.Phil,
QUALIFIED PERSON

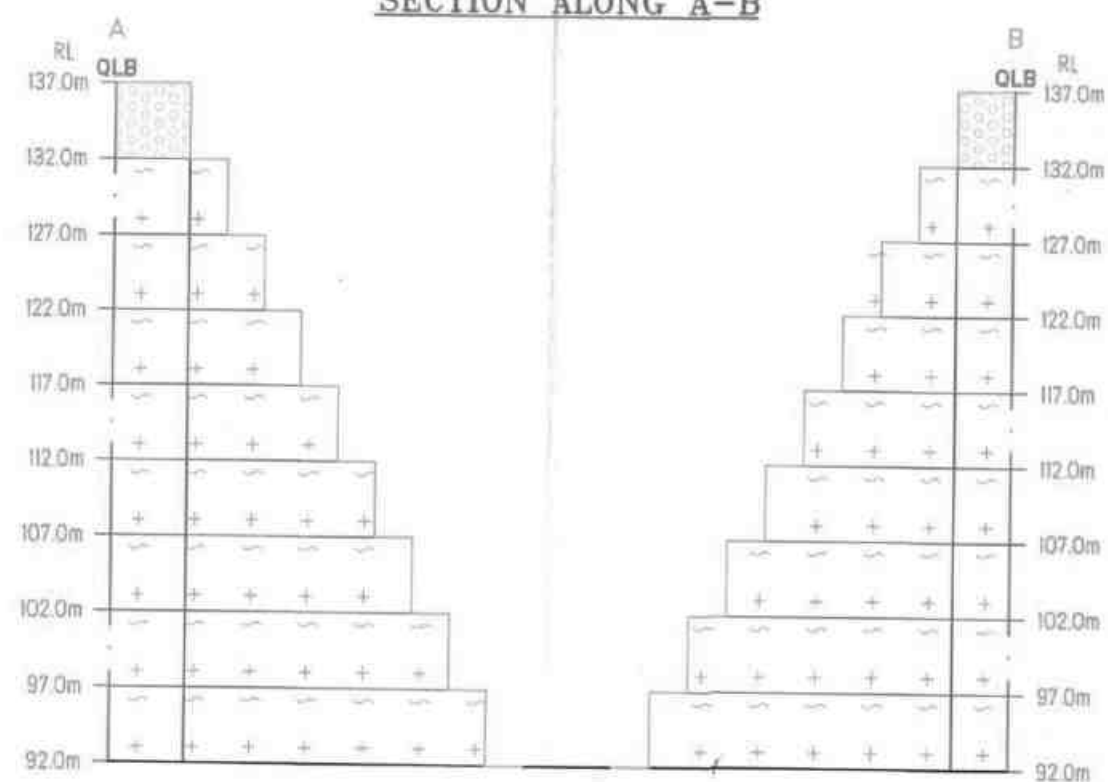


Boundary Co-Ordinates		
Label	Latitude	Longitude
1	09° 21' 13.79"N	77° 36' 36.59"E
2	09° 21' 15.75"N	77° 36' 36.70"E
3	09° 21' 17.96"N	77° 36' 36.97"E
4	09° 21' 16.60"N	77° 36' 41.94"E
5	09° 21' 16.27"N	77° 36' 42.09"E
6	09° 21' 15.49"N	77° 36' 41.99"E
7	09° 21' 14.65"N	77° 36' 41.65"E
8	09° 21' 12.93"N	77° 36' 42.04"E
9	09° 21' 13.31"N	77° 36' 39.85"E
Wgs 84 Datum		

SECTION ALONG X-Y



SECTION ALONG A-B



PROPOSED SITE SERVICES

- A - OFFICE
- B - STORE ROOM
- C - FIRST AID ROOM
- D - REST SHELTER
- E - TOILET

Proposed area to be Planted

PRESENT & POST LAND USE PATTERN

DESCRIPTION	PRESENT AREA (Ha)	AREA AT THE END OF THIS QUARRYING PERIOD (Ha)
AREA UNDER QUARRYING	NII	1.46.00
INFRASTRUCTURE	NII	0.01.00
ROADS	NII	0.01.00
GREEN BELT	NII	0.42.50
UN-UTILIZED AREA	1.90.50	NII
GRAND TOTAL	1.90.50	1.90.50

Ultimate Pit Dimension of End of the Mining Plan Period
L143mX102(Avg)mXD45m(Max)



PLATE NO-VI
DATE OF SURVEY : 17.05.2025

APPLICANT:
THIRU.B.KABILDEV,
S/o.BASKARAN,
NO.125/2, TEACHERS COLONY,
K.R.NAGAR (POST),
PUTHUPALAYAM,
RAJAPALAYAM TALUK,
VIRUDHUNAGAR DISTRICT.

QUARRY APPLIED LEASE AREA:
S.F.NO's : 623/1C, 623/1D, 623/1G, 623/2A,
623/2B, 623/2C, 623/1A, 623/1B,
623/1E & 623/1F,
EXTENT : 1.90.50 Ha,
VILLAGE : GOPALAPURAM,
TALUK : VEMBAKOTTAI,
DISTRICT : VIRUDHUNAGAR.

INDEX

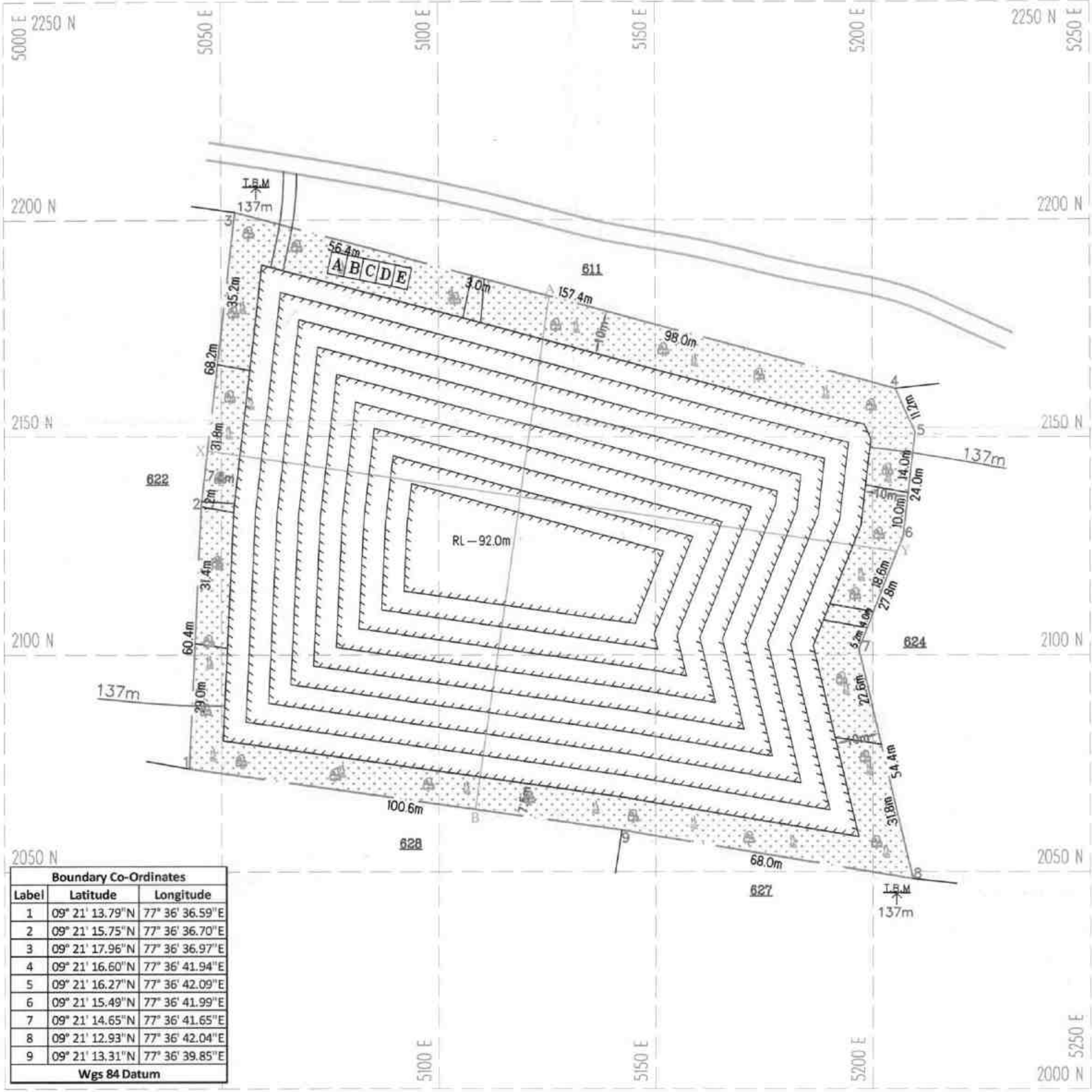
Q.L. APPLIED BOUNDARY	
7.5m & 10m SAFETY DISTANCE	
TEMPORARY BENCH MARK	
APPROACH ROAD	
CART TRACK	
CONTOUR	
SCRUB	
GRAVEL	
ROUGH STONE	
STRIKE & DIP	
PROPOSED QUARRY PIT	

**PROGRESSIVE QUARRY CLOSER
PLAN & SECTIONS**

SCALE 1 : 1000
SECTIONS HOR 1:1000, VER 1:500

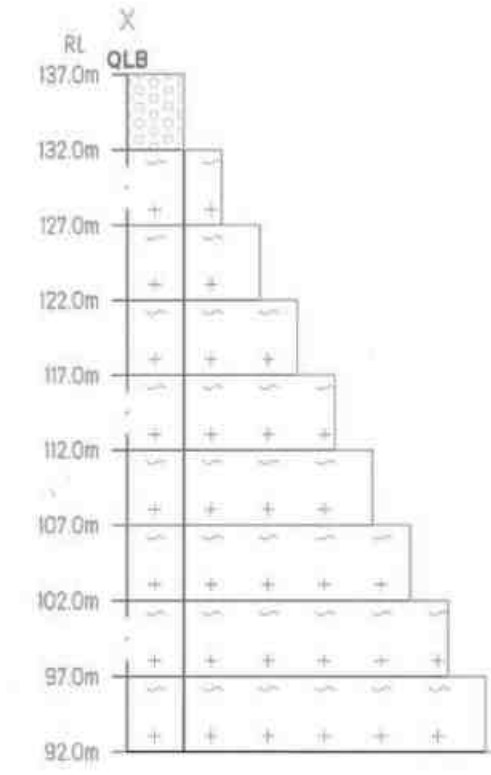
PREPARED BY:
THIS IS TO CERTIFY THAT THE INFORMATION
IN THIS PLATE IS TRUE AND CORRECT TO
THE BEST OF MY KNOWLEDGE BASED UPON
THE LEASE MAP AUTHENTICATED BY STATE
GOVERNMENT

C.NATARAJAN, M.Phil,
QUALIFIED PERSON

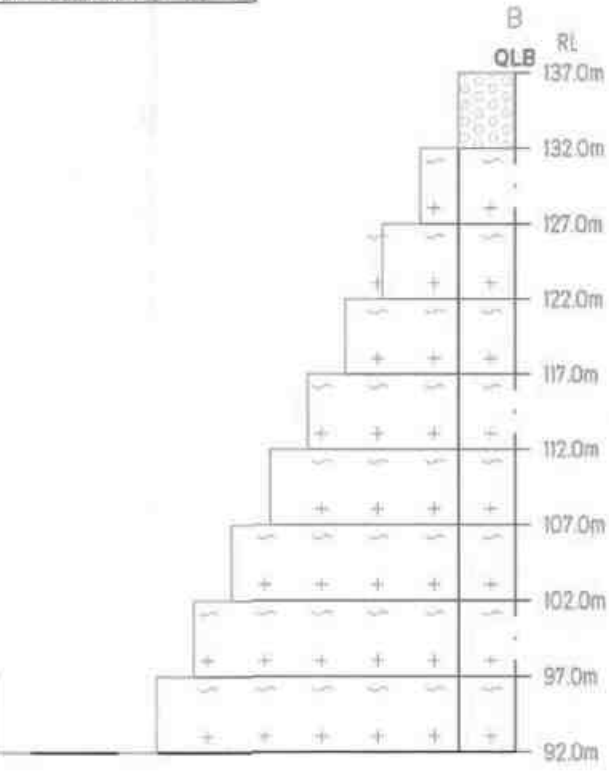
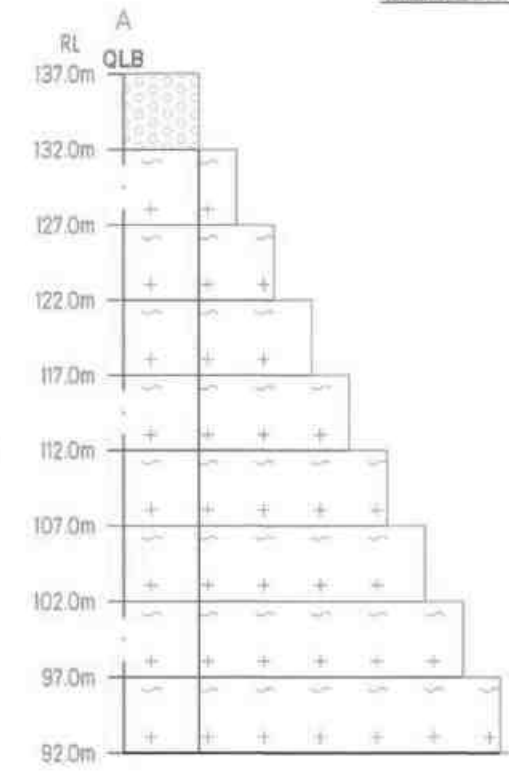
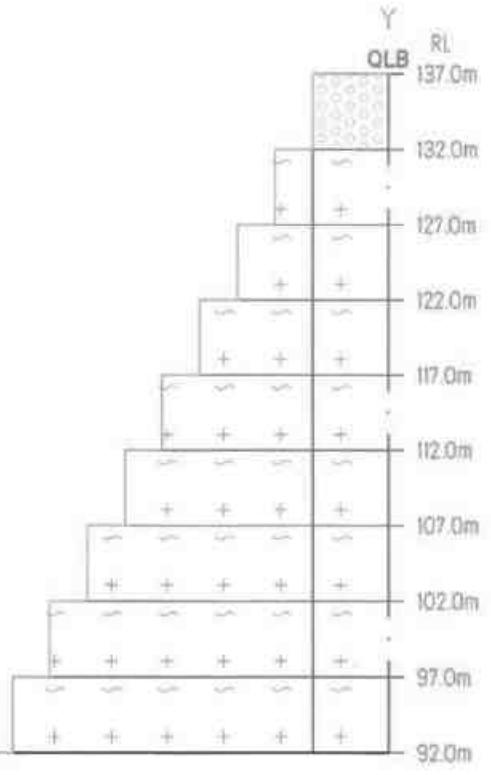


Boundary Co-Ordinates		
Label	Latitude	Longitude
1	09° 21' 13.79"N	77° 36' 36.59"E
2	09° 21' 15.75"N	77° 36' 36.70"E
3	09° 21' 17.96"N	77° 36' 36.97"E
4	09° 21' 16.60"N	77° 36' 41.94"E
5	09° 21' 16.27"N	77° 36' 42.09"E
6	09° 21' 15.49"N	77° 36' 41.99"E
7	09° 21' 14.65"N	77° 36' 41.65"E
8	09° 21' 12.93"N	77° 36' 42.04"E
9	09° 21' 13.31"N	77° 36' 39.85"E
Wgs 84 Datum		

SECTION ALONG X-Y



SECTION ALONG A-B



PROPOSED SITE SERVICES
A - OFFICE
B - STORE ROOM
C - FIRST AID ROOM
D - REST SHELTER
E - TOILET

Proposed area to be Planted

Ultimate Pit Dimension of End of the
Quarry Lease Period
L143mX102(Avg)mXD45m(Max)

PLATE NO-VII
DATE OF SURVEY : 17.05.2025

APPLICANT:
THIRU.B.KABILDEV,
S/o.BASKARAN,
NO.125/2, TEACHERS COLONY,
K.R.NAGAR (POST),
PUTHUPALAYAM,
RAJAPALAYAM TALUK,
VIRUDHUNAGAR DISTRICT.

QUARRY APPLIED LEASE AREA:
S.F.NO's : 623/1C, 623/1D, 623/1G, 623/2A,
623/2B, 623/2C, 623/1A, 623/1B,
623/1E & 623/1F,
EXTENT : 1.90.50 Ha,
VILLAGE : GOPALAPURAM,
TALUK : VEMBAKOTTAI,
DISTRICT : VIRUDHUNAGAR.

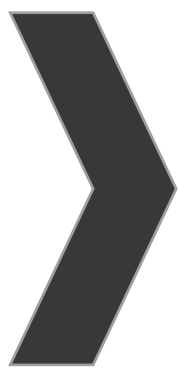
INDEX

- Q.L. APPLIED BOUNDARY
- 7.5m & 10m SAFETY DISTANCE
- TEMPORARY BENCH MARK
- APPROACH ROAD
- CART TRACK
- CONTOUR
- SCRUB
- GRAVEL
- ROUGH STONE
- STRIKE & DIP
- PROPOSED QUARRY PIT

CONCEPTUAL PLAN & SECTIONS
SCALE 1 : 1000
SECTIONS HOR 1:1000, VER 1:500

PREPARED BY:
THIS IS TO CERTIFY THAT THE INFORMATION
IN THIS PLATE IS TRUE AND CORRECT TO
THE BEST OF MY KNOWLEDGE BASED UPON
THE LEASE MAP AUTHENTICATED BY STATE
GOVERNMENT

C.NATHAN JAMES M.Sc., M.Phil,
QUALIFIED PERSON



ANNEXURE-4

From

Dr.S.Suhatharahima, M.Sc.,Ph.D.,
Assistant Director,
Geology and Mining,
Virudhunagar.

To

Thiru.B.Kabildev,
S/o. Baskaran,
No.125/2, Teachers Colony,
K.R Nagar (Post),
Puthupalayam,
Rajapalayam Taluk,
Virudhunagar District

Roc. No: KV1/1216/2024, Dated:09.06.2025

Sir,

Sub: Mines and Minerals - Minor Mineral -
Virudhunagar District - Vembakottai Taluk -
Gopalapuram Village - Patta Land - S.F.Nos:
623/1C, 623/1D, 623/1G, 623/2A, 623/2B,
623/2C, 623/1A, 623/1B, 623/1E and 623/1F
Extent 1.90.50 Hectares - Quarry lease application
preferred by Thiru. B.Kabildev, S/o Baskaran, for
quarrying Rough Stone and Gravel -Details of
quarries in 500 meter radius - Regarding.

- Ref:**
1. Quarry lease application received from Thiru. B.Kabildev dated: 05.11.2024.
 2. The Assistant Director, Geology and Mining, Virudhunagar Rc.No.KV1/1216/2024, Dated: 16.05.2025.
 3. Thiru. B.Kabildev, S/o Baskaran letter, dated: 20.05.2025.

Thiru. B.Kabildev, S/o Baskaran, has preferred an application for the grant of quarrying lease to quarry Rough Stone and Gravel over an extent of 1.90.50 Hectares of Patta Land in S.F.Nos: 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk & Virudhunagar District for a period of 10 (Ten) Years Under Rule 19 of Tamil Nadu Minor Mineral Concession Rules 1959.

2) The application was examined and consented to grant lease to quarrying Rough Stone and Gravel over an extent of 1.90.50 Hectares of Patta Land in S.F.No: 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F for a period of 10 (Ten) years subject to produce Mining Plan for approval and to obtain Environment Clearance from SEIAA in the reference 2nd cited.

3) The applicant has submitted the Mining Plan, prepared as per the guidelines issued by the Commissioner of Geology and Mining and as per the Rules and Acts. The Geological reserves, Mineable reserves and yearwise production are discussed in Table 1, 2, 3 & 4 of the mining plan. The Geological reserves is estimated as 20,94,400 MT Roughstone and 1,90,40 MT of Gravel. The mineable reserves is estimated as 6,72,210 MT Roughstone and 1,45,860 MT of Gravel upto a depth of 45 m below ground level for the period of Ten years.

4) The applicant Thiru. B.Kabildev S/O Baskaran in the reference 3rd cited has requested to furnish details of quarries situated within 500 m radial distance from the applied area.

5) As per his request the details of quarry situated within 500 meter radius from the proposed area for obtaining Environmental Clearance as detailed below:

Details of quarry situated within 500 meters radius from the applied area

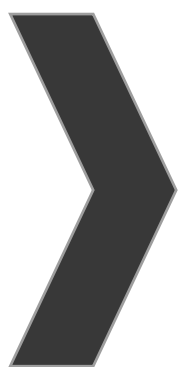
S.No	Quarry detail	Taluk & Village	S.F. No.& Extent (Hect)	Proceedings No. & Lease Period
I	Existing Quarries:			
1.	S.Murugesan, No.106/134, Madurai Rajakadai Street Rajapalayam	Vembakkottai, Gopalapuram	635/4(P), 636 2.89.0	KV1/170/2019 Dt.01.08.2020 26/08/2020 To 25/08/2025
2.	S.Murugesan, No.106/134, Madurai Rajakadai Street Rajapalayam	Vembakkottai, Gopalapuram	632(P) 1.25.00	KV1/708/2021 Dt.05.05.2025 05/05/2025 To 04/05/2030
3.	Thiru.P.Arumugam, M/s.Selvakumar Blue Metals	Vembakkottai, Gopalapuram	567/2A, 567/2B, 568/1B 2.48.5	KV1/159/2021 01/02/2023 To 31/01/2028
4.	Thiru.V.Rajmohan, M/s. Lakshmi Blue Metals, 540B, Gopalapuram Main Road, Nallamanaykenpatti (P)	Vembakkottai, Gopalapuram	557/1, 558/1, 558/2, 559, 574, 557/2 4.85.00	KV1/232/2021 Dt.31.01.2023 01/02/2023 To 31/01/2028

II Abandoned Quarry :			
1.	Government Quarry	Vembakkottai, Gopalapuram	624 Prior to 2013
III Present Proposed Quarry :			
1.	Thiru.S.Shanmugavel S/o, Subbaiah 300, D5/2, Sangaran Kovil Road, Rajapalayam	Vembakkottai, Gopalapuram	586/11, 586/12, 586/13 2.12.50 Hct., KV1/1029/2023
2.	B.Kabildev, S/o Baskaran	Vembakkottai, Gopalapuram	623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F 1.90.50 KV1/1216/2024

[Signature]
**Assistant Director,
Geology and Mining,
Virudhunagar.**

Copy to :

The Member Secretary,
State Level Environmental Impact
Assessment Authority,
State Expert Appraisal Committee
at SEAC Conference Hall 9th Floor,
Metros (CMRL building),
Nandanam,
Chennai-600035.



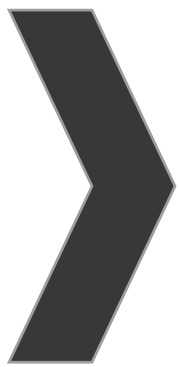
ANNEXURE-5

சின்னம்

உறுதிநிலை மாவட்டம், வைப்பக்கோட்டை வட்டம்
கோபாலபுரம் உறுதியைக் கிராமத்தில், கல்குடி ரிஸ்
பாண்டிதன் என்பவர் இவ்வாறு சம்பந்தமுள்ள பண்டம்
யை அளக்க - 623/1A-0.18.0; 623/1B-0.17.5;
623/1C-0.01.0; 623/1D-0.03.0; 623/1E-0.28.5
623/1F-0.29.5; 623/1G-0.03.0; 623/2A-0.01.5;
623/2B-0.42.0 - மஞ்சம் - 623/2C-0.46.5 - ஆகிய
பண்டங்களில் ஒன்றை தரவும் கல்குடி அளக்க, மேல்
மண்ணத்தினை கல்குடி தரவும் கல்குடி அளக்க மேற்படி
பண்டத்தைச் சிறுநி 300- டீபர் சிறுநிதற்குள் எவ்வளவு
- மண் குடிவிற்பனை, புதுநிதன் கிணத்தின் மீதும்
உறுதியைக் கிராமத்தின் தரவும் கல்குடி அளக்க கிண
தின் சின்னத்தினை V குறிக்க.

 02/06/2025

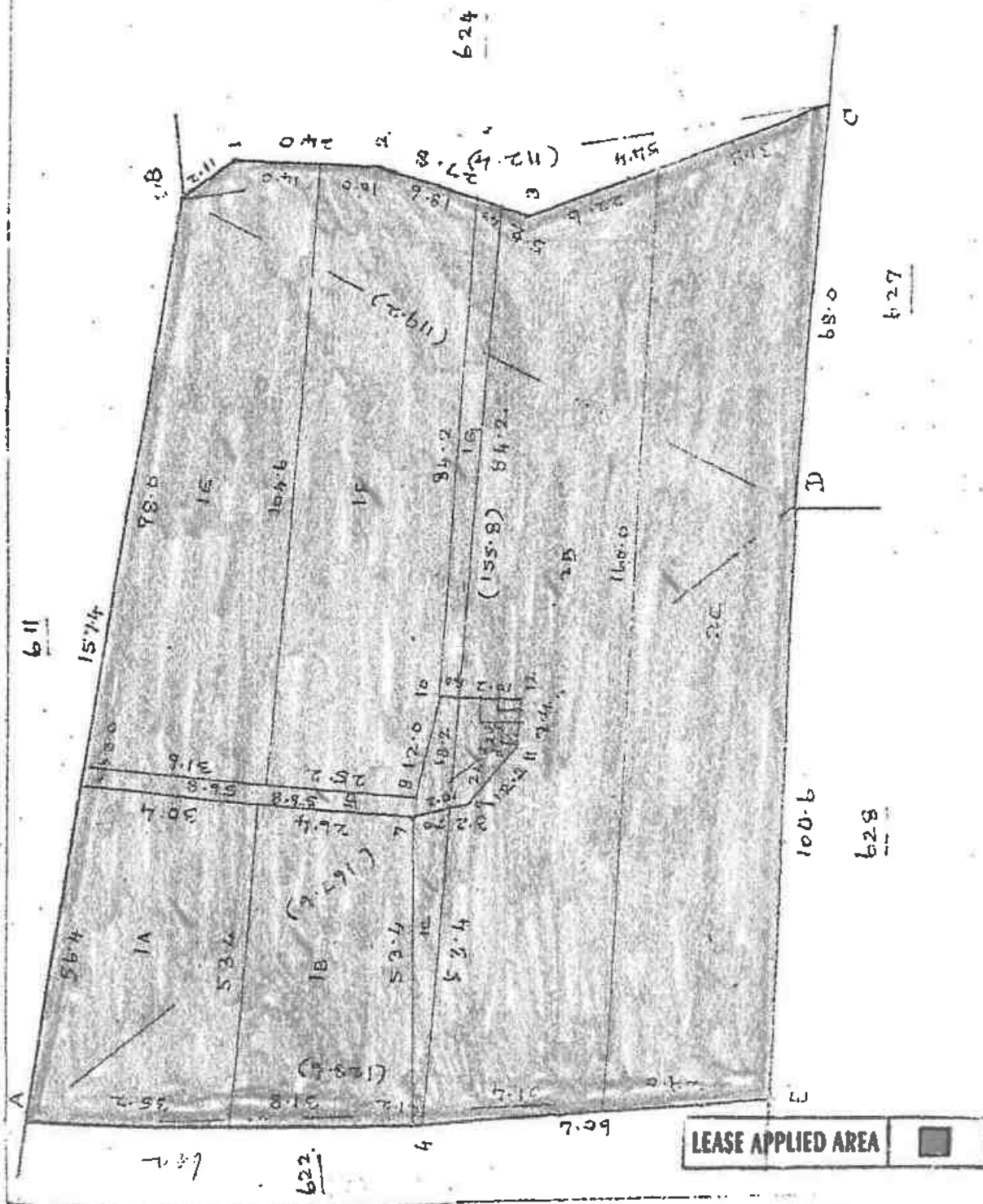
கிராம நிர்வாக அலுவலர்
கோபாலபுரம் கிராமம்
வைப்பக்கோட்டை வட்டம்



ANNEXURE-6

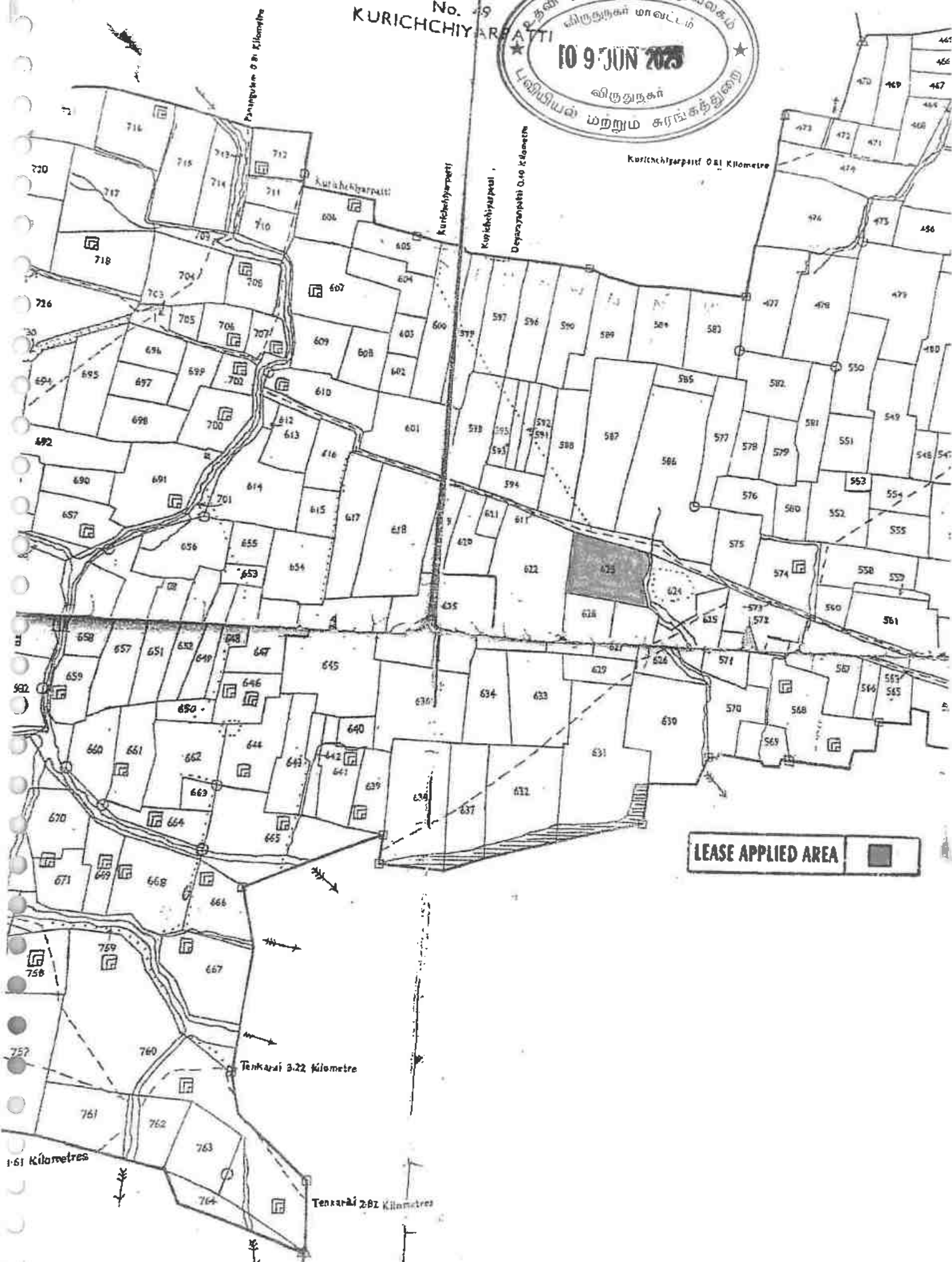
பரப்பு - இலட்சக்கோடி

১৯৩৩



LEASE APPLIED AREA

No. 19





தமிழ்நாடு அரசு

வருவாய்த் துறை

நில உரிமை விபரங்கள் : இ. எண் 10(1) பிரிவு

மாவட்டம் : விருதுநகர்

வட்டம் : வெம்பக்கோட்டை

வருவாய் கிராமம் : கோபாலபுரம்

பட்டா எண் : 2440

உரிமையாளர்கள் பெயர்

1. பாஸ்கரன்

மகன்

கபில்தேவ்



புல எண்	உட்பிரிவு	புன்செய்		நன்செய்		மற்றவை		குறிப்புகள்
		பரப்பு	தீர்வை	பரப்பு	தீர்வை	பரப்பு	தீர்வை	
		ஹெக் - ஏர்	ரூ - பை	ஹெக் - ஏர்	ரூ - பை	ஹெக் - ஏர்	ரூ - பை	
623	1C	0 - 1.00	0.06	--	--	--	--	2024/0103/26/247119- -- ----- 03-08-2024
623	1D	0 - 3.00	0.06	--	--	--	--	2024/0103/26/247119- -- --பம்புசெட் கிணறு- ---- 03-08-2024
623	1G	0 - 3.00	0.06	--	--	--	--	2024/0103/26/247119- -- ----- 03-08-2024
623	2A	0 - 1.50	0.06	--	--	--	--	2024/0103/26/247119- -- --சதுரக்கிணறு பம்புசெட்----- 03-08- 2024
623	2B	0 - 42.00	0.84	--	--	--	--	2024/0103/26/247119- -- ----- 03-08-2024
623	2C	0 - 46.50	0.93	--	--	--	--	2024/0103/26/247119- -- ----- 03-08-2024
		0 - 97.00	2.01					

குறிப்பு :



- மேற்கண்ட தகவல் / சான்றிதழ் நகல் விவரங்கள் மின் பதிவேட்டிலிருந்து பெறப்பட்டவை. இவற்றை தாங்கள் <https://eservices.tn.gov.in> என்ற இணைய தளத்தில் 26/09/010/02440/100090 என்ற குறிப்பு எண்ணை உள்ளீடு செய்து உறுதி செய்துகொள்ளவும்.
- இத் தகவல்கள் 07-08-2024 அன்று 03:43:49 PM நேரத்தில் அச்சடிக்கப்பட்டது.
- கைப்பேசி கேமராவின் 2D barcode படிப்பான் மூலம் படித்து 3G/GPRS வழி இணையதளத்தில் சரிபார்க்கவும்



தமிழ்நாடு அரசு

வருவாய்த் துறை

நில உரிமை விபரங்கள் : இ- எண் 10(1) பிரிவு .

வட்டம் : வெம்பக்கோட்டை

பட்டா எண் : 2450

மாவட்டம் : விருதுநகர்

வருவாய் கிராமம் : கோபாலபுரம்

உரிமையாளர்கள் பெயர்

மகன்

கபில்தேவ்

பாஸ்கரன்

புல எண்	உட்பிரிவு	புன்செய்		நன்செய்		மற்றவை		குறிப்புரைகள்
		பரப்பு	தீர்வை	பரப்பு	தீர்வை	பரப்பு	தீர்வை	
		ஹெக் - ஏர்	ரூ - பை	ஹெக் - ஏர்	ரூ - பை	ஹெக் - ஏர்	ரூ - பை	
623	1A	0 - 18.00	0.36	--	--	--	--	2024/0103/26/251525- ----- 31-08-2024
623	1B	0 - 17.50	0.35	--	--	--	--	2024/0103/26/251525- ----- 31-08-2024
623	1E	0 - 28.50	0.58	--	--	--	--	2024/0103/26/251525- ----- 31-08-2024
623	1F	0 - 29.50	0.58	--	--	--	--	2024/0103/26/251525- -----பரிந்துரை----- 31-08-2024
		0 - 93.50	1.87					

குறிப்பு :



- மேற்கண்ட தகவல் / சான்றிதழ் நகல் விவரங்கள் மின் பதிவேட்டிலிருந்து பெறப்பட்டவை. இவற்றை தாங்கள் <https://eservices.tn.gov.in> என்ற இணைய தளத்தில் 26/09/010/02450/100091 என்ற குறிப்பு எண்ணை உள்ளீடு செய்து உறுதி செய்துகொள்ளவும்.
- இத் தகவல்கள் 31-08-2024 அன்று 05:59:11 PM நேரத்தில் அச்சடிக்கப்பட்டது.
- சைகப்பேசி கேமராவின் 2D barcode படிப்பான் மூலம் படித்து 3G/GPRS வழி இணையதளத்தில் சரிபார்க்கவும்

A - VIRUDHUNAGAR TALUK - VEMBAKKOTTAI VILLAGE - GOPALAPURAM

622-9	7-3	4	2	00	0	23.00	0	16	550-விநாயக மூர்த்தி	
TOTAL FOR SURVEY NUMBER- 622					3	41.00	6	04		
623-1	7-3	4	2	00	0	18.00	0	36	1779-முத்துகிருஷ்ணன் என்ற கிருஷ்ணன்	
623-1	7-3	4	2	00	0	17.50	0	35	493-ராமசாமி நாயக்கர்	
623-1	7-3	4	2	00	0	1.00	0	06	365-நாராயணசாமி நாயக்கர்	
623-1	7-3	4	2	00	0	3.00	0	06	823-அச்சய நாயக்கர் மற்றும் 3 நபர்(கள்)	
623-1	7-3	4	2	00	0	20.50	0	58	1779-முத்துகிருஷ்ணன் என்ற கிருஷ்ணன்	
623-1	7-3	4	2	00	0	29.00	0	58	493-ராமசாமி நாயக்கர்	0.29.5 X
623-1	7-3	4	2	00	0	3.00	0	06	365-நாராயணசாமி நாயக்கர்	
623-2	7-3	4	2	00	0	1.50	0	06	823-அச்சய நாயக்கர், மற்றும் 3 நபர்(கள்)	
623-2	7-3	4	2	00	0	42.00	0	84	365-நாராயணசாமி நாயக்கர்	
623-2	7-3	4	2	00	0	46.50	0	93	989-நாராயணசாமி	
TOTAL FOR SURVEY NUMBER- 623					1	90.00	3	88	1.90.5	
624	0-0	0	0	00	0	31.50	0	00		சிறீமதி சந்திரா சித்
624	0-0	0	0	00	0	31.50	0	00		
TOTAL FOR SURVEY NUMBER- 624					2	63.00	0	00		
625-1	7-3	4	2	00	0	34.50	0	69	1007-ராமசாமி	
625-2	7-3	4	2	00	0	37.00	0	74	170-காபால்சாமி	
TOTAL FOR SURVEY NUMBER- 625					0	71.50	1	43		
626-1	0-0	0	0	00	0	22.50	0	00		சிறீமதி சந்திரா சித்
626-1	0-0	0	0	00	0	22.50	0	00		
626-2	7-3	4	2	00	0	52.00	1	04	550-விநாயக மூர்த்தி	
TOTAL FOR SURVEY NUMBER- 626					0	97.00	1	04		





2	3	4	5	6	7	8	9	10	11
23-1B	ர	4	...	7-3	4	2 00	0 17 5	0 35	493 ரா. ராமசுந்தரி நாயக்கர்.
-1C	ர	4	...	7-3	4	2 00	0 01.0	0 06	365 ரா. நாராயண சாமி நாயக்கர்.
-1D	ர	4	...	7-3	4	2 00	0 03.0	0 06	823 ரா. அச்சய நாயக்கர். மற்றும் முன்று பேர்களும்.
-1E	ர	4	...	7-3	4	2 00	0 28.5	0 58	12 ரா. அச்சய நாயக்கர்.
-1F	ர	4	...	7-3	4	2 10	0 29.5	0 58	493 ரா. ராமசுந்தரி நாயக்கர்.
-1G	ர	4	...	7-3	4	2 00	0 03 0	0 06	365 ரா. நாராயண சாமி நாயக்கர்.
-2A	ர	4	...	7-3	4	2 00	0 01.5	0 06	823 ரா. அச்சய நாயக்கர். மற்றும் முன்று பேர்களும்.
-2B	ர	4	...	7-3	4	2 00	0 41.0	0 84	365 ரா. நாராயண சாமி நாயக்கர்.
-2C	ர	4	...	7-3	4	2 00	0 46.5	0 93	38 ரா. அய்யப்ப நாயக்கர்.
624	சு	தி.ஏ.த	...	...	...	...	1 90.5	3 88	
625-பா	ர	4	...	7-3	4	2 00	0 34.5	0 69	384 கோ. பால கிருஷ்ண நாயக்கர்.
-பா	ர	4	...	7-3	4	2 00	0 37.0	0 74	170 கோ. கோபால் சாமி நாயக்கர்.
626-1	சு	4/த	...	...	...	...	0 71.5	1 43	
-2	ர	4	...	7-3	4	2 00	0 22.5	...	
							0 52.0	1 04	101 சு. கிருஷ்ண நாயக்கர்.
							0 74.5	1 04	

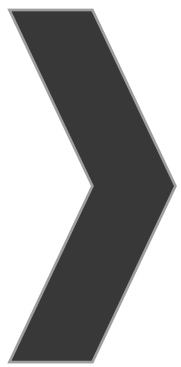
பகுதி பம்புகேட் சதுரக் கிணறு

சதுரக் கிணறு பம்புகேட்

தீர்வை ஏற்பட்டாத தரிசு.

— 200000 ரூபாய் —

04/09/25
101 சு. கிருஷ்ண நாயக்கர்.
கோபாலபுரம்
விருதுநகர்



ANNEXURE-7



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/0936	Report Date.	17.03.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A1- Project Location
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0936	Sample Received on	10.03.2025
Sample Collected by	LABORATORY	Test Commenced on	10.03.2025
Sample Collected on	04.03.2025	Test Completed on	17.03.2025
Temperature	36°C	Relative Humidity	25%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	67.4	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	32.8	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.7	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.5	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL(D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

END OF THE REPORT

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/0937	Report Date.	17.03.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A2-Sivalingapuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0937	Sample Received on	10.03.2025
Sample Collected by	LABORATORY	Test Commenced on	10.03.2025
Sample Collected on	04.03.2025	Test Completed on	17.03.2025
Temperature	36°C	Relative Humidity	25%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	46.7	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	22.2	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.4	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



END OF THE REPORT

Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/0938	Report Date.	17.03.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A1- Project Location
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0938	Sample Received on	10.03.2025
Sample Collected by	LABORATORY	Test Commenced on	10.03.2025
Sample Collected on	05.03.2025	Test Completed on	17.03.2025
Temperature	36°C	Relative Humidity	27%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	71.0	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	34.4	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	7.2	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.9	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



END OF THE REPORT

S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/0939	Report Date.	17.03.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

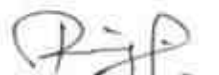
Sample Location	A2-Sivalingapuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0939	Sample Received on	10.03.2025
Sample Collected by	LABORATORY	Test Commenced on	10.03.2025
Sample Collected on	05.03.2025	Test Completed on	17.03.2025
Temperature	34°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	57.5	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	27.8	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.7	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	8.5	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd


Verified




Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

END OF THE REPORT

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/0940	Report Date.	17.03.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A3-Ananthappanaickerpatti
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0940	Sample Received on	10.03.2025
Sample Collected by	LABORATORY	Test Commenced on	10.03.2025
Sample Collected on	06.03.2025	Test Completed on	17.03.2025
Temperature	34°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	65.8	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	31.1	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	7.8	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	12.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



END OF THE REPORT

Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/0941	Report Date.	17.03.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A4-Tenkarai
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0941	Sample Received on	10.03.2025
Sample Collected by	LABORATORY	Test Commenced on	10.03.2025
Sample Collected on	06.03.2025	Test Completed on	17.03.2025
Temperature	36°C	Relative Humidity	27%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	59.1	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	28.9	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.7	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	10.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



END OF THE REPORT

Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/0942	Report Date.	17.03.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A3-Ananthappaickerpatti
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0942	Sample Received on	10.03.2025
Sample Collected by	LABORATORY	Test Commenced on	10.03.2025
Sample Collected on	07.03.2025	Test Completed on	17.03.2025
Temperature	36°C	Relative Humidity	27%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	61.6	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	29.1	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.4	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	11.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd


Verified




Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

END OF THE REPORT

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/0943	Report Date.	17.03.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A4-Tenkarai
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0943	Sample Received on	10.03.2025
Sample Collected by	LABORATORY	Test Commenced on	10.03.2025
Sample Collected on	07.03.2025	Test Completed on	17.03.2025
Temperature	36°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	55.7	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	27.2	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.1	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.7	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

END OF THE REPORT

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/0944	Report Date.	17.03.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A5-Varagunaramapuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0944	Sample Received on	10.03.2025
Sample Collected by	LABORATORY	Test Commenced on	10.03.2025
Sample Collected on	08.03.2025	Test Completed on	17.03.2025
Temperature	36°C	Relative Humidity	26%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	47.2	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	22.9	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.4	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	8.6	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



END OF THE REPORT

Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/0945	Report Date.	17.03.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A6-A. Lakshmipuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0945	Sample Received on	10.03.2025
Sample Collected by	LABORATORY	Test Commenced on	10.03.2025
Sample Collected on	08.03.2025	Test Completed on	17.03.2025
Temperature	36°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	47.6	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	22.4	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.4	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.4	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

END OF THE REPORT

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/0946	Report Date.	17.03.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

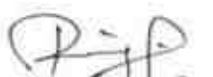
Sample Location	A5-Varagunaramapuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0946	Sample Received on	10.03.2025
Sample Collected by	LABORATORY	Test Commenced on	10.03.2025
Sample Collected on	09.03.2025	Test Completed on	17.03.2025
Temperature	35°C	Relative Humidity	32%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	51.4	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	25.2	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.2	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.4	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd


Verified




Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

END OF THE REPORT

Please Contact:

For any Technical Issues&Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/0947	Report Date.	17.03.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A6-A. Lakshmipuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0947	Sample Received on	10.03.2025
Sample Collected by	LABORATORY	Test Commenced on	10.03.2025
Sample Collected on	09.03.2025	Test Completed on	17.03.2025
Temperature	35°C	Relative Humidity	32%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	50.4	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	23.6	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.0	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.9	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



END OF THE REPORT

S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/0984	Report Date.	24.03.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A5-Varagunaramapuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0984	Sample Received on	17.03.2025
Sample Collected by	LABORATORY	Test Commenced on	17.03.2025
Sample Collected on	11.03.2025	Test Completed on	24.03.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	55.1	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	27.4	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.8	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	10.9	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

END OF THE REPORT

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/0985	Report Date.	24.03.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A6-A. Lakshmipuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0985	Sample Received on	17.03.2025
Sample Collected by	LABORATORY	Test Commenced on	17.03.2025
Sample Collected on	11.03.2025	Test Completed on	24.03.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	41.7	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	19.6	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	3.8	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	7.7	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd


Verified



END OF THE REPORT


Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/0986	Report Date.	24.03.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A5-Varagunaramapuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0986	Sample Received on	17.03.2025
Sample Collected by	LABORATORY	Test Commenced on	17.03.2025
Sample Collected on	12.03.2025	Test Completed on	24.03.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	50.8	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	25.0	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.1	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



Authorized Signatory

S. BALAMURUGAN
Asst. Technical Manager

END OF THE REPORT

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/0987	Report Date.	24.03.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A6-A. Lakshmipuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0987	Sample Received on	17.03.2025
Sample Collected by	LABORATORY	Test Commenced on	17.03.2025
Sample Collected on	12.03.2025	Test Completed on	24.03.2025
Temperature	37°C	Relative Humidity	21%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	43.6	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	20.5	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.3	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	8.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

END OF THE REPORT

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/0988	Report Date.	24.03.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A3-Ananthappaickerpatti
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0988	Sample Received on	17.03.2025
Sample Collected by	LABORATORY	Test Commenced on	17.03.2025
Sample Collected on	13.03.2025	Test Completed on	24.03.2025
Temperature	37°C	Relative Humidity	23%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	55.1	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	26.1	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.5	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.5	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

END OF THE REPORT

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/0989	Report Date.	24.03.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A4-Tenkarai
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0989	Sample Received on	17.03.2025
Sample Collected by	LABORATORY	Test Commenced on	17.03.2025
Sample Collected on	13.03.2025	Test Completed on	24.03.2025
Temperature	37°C	Relative Humidity	23%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	49.3	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	24.2	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.1	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	8.7	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL –Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



END OF THE REPORT

Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

For any Technical Issues&Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/0990	Report Date.	24.03.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A3-Ananthappaickerpatti
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0990	Sample Received on	17.03.2025
Sample Collected by	LABORATORY	Test Commenced on	17.03.2025
Sample Collected on	14.03.2025	Test Completed on	24.03.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	58.3	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	27.6	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.0	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	10.4	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd


Verified




Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

END OF THE REPORT

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/0991	Report Date.	24.03.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A4-Tenkarai
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0991	Sample Received on	17.03.2025
Sample Collected by	LABORATORY	Test Commenced on	17.03.2025
Sample Collected on	14.03.2025	Test Completed on	24.03.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	50.7	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	24.8	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.3	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	8.9	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



END OF THE REPORT

Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/0992	Report Date.	24.03.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A1- Project Location
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0992	Sample Received on	17.03.2025
Sample Collected by	LABORATORY	Test Commenced on	17.03.2025
Sample Collected on	15.03.2025	Test Completed on	24.03.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	65.6	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	31.8	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.5	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.3	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



END OF THE REPORT

Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/00993	Report Date.	24.03.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A2-Sivalingapuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0993	Sample Received on	17.03.2025
Sample Collected by	LABORATORY	Test Commenced on	17.03.2025
Sample Collected on	15.03.2025	Test Completed on	24.03.2025
Temperature	35°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	52.7	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	25.0	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.3	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	10.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL –Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

END OF THE REPORT

Please Contact:

For any Technical Issues&Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/0994	Report Date.	24.03.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A1- Project Location
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0994	Sample Received on	17.03.2025
Sample Collected by	LABORATORY	Test Commenced on	17.03.2025
Sample Collected on	16.03.2025	Test Completed on	24.03.2025
Temperature	35°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	53.8	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	26.7	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.6	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	8.5	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

END OF THE REPORT

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/0995	Report Date.	24.03.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A2-Sivalingapuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-0995	Sample Received on	17.03.2025
Sample Collected by	LABORATORY	Test Commenced on	17.03.2025
Sample Collected on	16.03.2025	Test Completed on	24.03.2025
Temperature	35°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	47.9	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	22.7	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.6	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.5	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



END OF THE REPORT

Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1032	Report Date.	31.03.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A1- Project Location
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1032	Sample Received on	24.03.2025
Sample Collected by	LABORATORY	Test Commenced on	24.03.2025
Sample Collected on	18.03.2025	Test Completed on	31.03.2025
Temperature	36°C	Relative Humidity	25%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	59.3	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	28.9	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.9	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	8.7	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL(D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd


Verified




Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

END OF THE REPORT

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1033	Report Date.	31.03.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A2-Sivalingapuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1033	Sample Received on	24.03.2025
Sample Collected by	LABORATORY	Test Commenced on	24.03.2025
Sample Collected on	18.03.2025	Test Completed on	31.03.2025
Temperature	36°C	Relative Humidity	25%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	52.1	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	24.7	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.2	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	10.1	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



END OF THE REPORT

Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1034	Report Date.	31.03.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A1- Project Location
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1034	Sample Received on	24.03.2025
Sample Collected by	LABORATORY	Test Commenced on	24.03.2025
Sample Collected on	19.03.2025	Test Completed on	31.03.2025
Temperature	36°C	Relative Humidity	27%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	64.8	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	31.4	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.4	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



END OF THE REPORT

Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1035	Report Date.	31.03.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A2-Sivalingapuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1035	Sample Received on	24.03.2025
Sample Collected by	LABORATORY	Test Commenced on	24.03.2025
Sample Collected on	19.03.2025	Test Completed on	31.03.2025
Temperature	34°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	60.6	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	29.4	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.0	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	8.8	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



END OF THE REPORT

Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1036	Report Date.	31.03.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A3-Ananthappanaickerpatti
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1036	Sample Received on	24.03.2025
Sample Collected by	LABORATORY	Test Commenced on	24.03.2025
Sample Collected on	20.03.2025	Test Completed on	31.03.2025
Temperature	34°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	50.3	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	23.9	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.9	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	8.7	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



END OF THE REPORT

Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1037	Report Date.	31.03.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

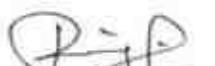
Sample Location	A4-Tenkarai
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1037	Sample Received on	24.03.2025
Sample Collected by	LABORATORY	Test Commenced on	24.03.2025
Sample Collected on	20.03.2025	Test Completed on	31.03.2025
Temperature	36°C	Relative Humidity	27%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	45.1	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	22.1	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.4	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	8.0	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd


Verified




Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

END OF THE REPORT

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1038	Report Date.	31.03.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A3-Ananthappaickerpatti
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1038	Sample Received on	24.03.2025
Sample Collected by	LABORATORY	Test Commenced on	24.03.2025
Sample Collected on	21.03.2025	Test Completed on	31.03.2025
Temperature	36°C	Relative Humidity	27%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	54.3	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	25.7	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.4	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

END OF THE REPORT

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1039	Report Date.	31.03.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A4-Tenkarai
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1039	Sample Received on	24.03.2025
Sample Collected by	LABORATORY	Test Commenced on	24.03.2025
Sample Collected on	21.03.2025	Test Completed on	31.03.2025
Temperature	36°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	52.8	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	25.8	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.7	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd


Verified




Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

END OF THE REPORT

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1040	Report Date.	31.03.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A5-Varagunaramapuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1040	Sample Received on	24.03.2025
Sample Collected by	LABORATORY	Test Commenced on	24.03.2025
Sample Collected on	22.03.2025	Test Completed on	31.03.2025
Temperature	36°C	Relative Humidity	26%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	42.4	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	20.6	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.5	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	7.7	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

END OF THE REPORT

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1041	Report Date.	31.03.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A6-A. Lakshmipuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1041	Sample Received on	24.03.2025
Sample Collected by	LABORATORY	Test Commenced on	24.03.2025
Sample Collected on	22.03.2025	Test Completed on	31.03.2025
Temperature	36°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	50.7	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	23.8	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.3	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	10.1	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd


Verified




Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

END OF THE REPORT

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1042	Report Date.	31.03.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A5-Varagunaramapuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1042	Sample Received on	24.03.2025
Sample Collected by	LABORATORY	Test Commenced on	24.03.2025
Sample Collected on	23.03.2025	Test Completed on	31.03.2025
Temperature	35°C	Relative Humidity	32%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	44.8	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	21.9	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.0	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	8.1	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



END OF THE REPORT

Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.

LAB SERVICES FOR:- Food, Water, Milk, Environment, Academic & Industrial Segment.

CIN : U74999TN2017PTC116807 / GST No : 33AAYCS7325R1ZA / PAN No: AAYCS7325R

Page 11 of 12



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1043	Report Date.	31.03.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A6-A. Lakshmipuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1043	Sample Received on	24.03.2025
Sample Collected by	LABORATORY	Test Commenced on	24.03.2025
Sample Collected on	23.03.2025	Test Completed on	31.03.2025
Temperature	35°C	Relative Humidity	32%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	47.2	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	22.2	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.3	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



END OF THE REPORT

S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1080	Report Date.	07.04.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

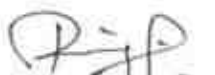
Sample Location	A5-Varagunaramapuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1080	Sample Received on	31.03.2025
Sample Collected by	LABORATORY	Test Commenced on	31.03.2025
Sample Collected on	25.03.2025	Test Completed on	07.04.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	52.7	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	25.8	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.5	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.6	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd


Verified




Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

END OF THE REPORT

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1081	Report Date.	07.04.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A6-A. Lakshmipuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1081	Sample Received on	31.03.2025
Sample Collected by	LABORATORY	Test Commenced on	31.03.2025
Sample Collected on	25.03.2025	Test Completed on	07.04.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	42.0	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	19.8	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	3.9	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	7.8	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



END OF THE REPORT

Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.

LAB SERVICES FOR:- Food, Water, Milk, Environment, Academic & Industrial Segment.

CIN : U74999TN2017PTC116807 / GST No : 33AAYCS7325R1ZA / PAN No: AAYCS7325R

Page 2 of 12



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1082	Report Date.	07.04.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A5-Varagunaramapuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1082	Sample Received on	31.03.2025
Sample Collected by	LABORATORY	Test Commenced on	31.03.2025
Sample Collected on	26.03.2025	Test Completed on	07.04.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	43.6	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	21.2	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.8	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	7.9	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



Authorized Signatory

S. BALAMURUGAN
Asst. Technical Manager

END OF THE REPORT

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.

LAB SERVICES FOR:- Food, Water, Milk, Environment, Academic & Industrial Segment.

CIN : U74999TN2017PTC116807 / GST No : 33AAYCS7325R1ZA / PAN No: AAYCS7325R

Page 3 of 12



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1083	Report Date.	07.04.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A6-A. Lakshmipuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1083	Sample Received on	31.03.2025
Sample Collected by	LABORATORY	Test Commenced on	31.03.2025
Sample Collected on	26.03.2025	Test Completed on	07.04.2025
Temperature	37°C	Relative Humidity	21%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	45.2	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	21.3	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.9	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	8.7	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

END OF THE REPORT

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1084	Report Date.	07.04.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A3-Ananthappaickerpatti
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1084	Sample Received on	31.03.2025
Sample Collected by	LABORATORY	Test Commenced on	31.03.2025
Sample Collected on	27.03.2025	Test Completed on	07.04.2025
Temperature	37°C	Relative Humidity	23%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	59.9	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	28.5	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.2	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	10.7	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd


Verified




Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

END OF THE REPORT

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1085	Report Date.	07.04.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A4-Tenkarai
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1085	Sample Received on	31.03.2025
Sample Collected by	LABORATORY	Test Commenced on	31.03.2025
Sample Collected on	27.03.2025	Test Completed on	07.04.2025
Temperature	37°C	Relative Humidity	23%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	58.4	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	28.5	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.5	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	10.1	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



END OF THE REPORT

Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1086	Report Date.	07.04.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A3-Ananthappaickerpatti
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1086	Sample Received on	31.03.2025
Sample Collected by	LABORATORY	Test Commenced on	31.03.2025
Sample Collected on	28.03.2025	Test Completed on	07.04.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	55.9	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	26.5	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.7	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.8	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd


Verified




Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

END OF THE REPORT

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1087	Report Date.	07.04.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A4-Tenkarai
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1087	Sample Received on	31.03.2025
Sample Collected by	LABORATORY	Test Commenced on	31.03.2025
Sample Collected on	28.03.2025	Test Completed on	07.04.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	51.4	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	25.2	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.4	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.0	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



END OF THE REPORT

Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1088	Report Date.	07.04.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A1- Project Location
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1088	Sample Received on	31.03.2025
Sample Collected by	LABORATORY	Test Commenced on	31.03.2025
Sample Collected on	29.03.2025	Test Completed on	07.04.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	73.2	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	35.6	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	7.5	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	10.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



END OF THE REPORT

Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1089	Report Date.	07.04.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A2-Sivalingapuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1089	Sample Received on	31.03.2025
Sample Collected by	LABORATORY	Test Commenced on	31.03.2025
Sample Collected on	29.03.2025	Test Completed on	07.04.2025
Temperature	35°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	51.3	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	26.6	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.5	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	8.4	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL –Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



END OF THE REPORT

Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

For any Technical Issues&Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1090	Report Date.	07.04.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A1- Project Location
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1090	Sample Received on	31.03.2025
Sample Collected by	LABORATORY	Test Commenced on	31.03.2025
Sample Collected on	30.03.2025	Test Completed on	07.04.2025
Temperature	35°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	69.2	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	33.4	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.9	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.7	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

END OF THE REPORT

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1091	Report Date.	07.04.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A2-Sivalingapuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1091	Sample Received on	31.03.2025
Sample Collected by	LABORATORY	Test Commenced on	31.03.2025
Sample Collected on	30.03.2025	Test Completed on	07.04.2025
Temperature	35°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	47.5	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	25.6	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.1	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	8.9	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

END OF THE REPORT

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1128	Report Date.	14.04.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A1- Project Location
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1128	Sample Received on	07.04.2025
Sample Collected by	LABORATORY	Test Commenced on	07.04.2025
Sample Collected on	01.04.2025	Test Completed on	14.04.2025
Temperature	36°C	Relative Humidity	25%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	55.9	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	28.5	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.4	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.1	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL(D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

END OF THE REPORT

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1129	Report Date.	14.04.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A2-Sivalingapuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1129	Sample Received on	07.04.2025
Sample Collected by	LABORATORY	Test Commenced on	07.04.2025
Sample Collected on	01.04.2025	Test Completed on	14.04.2025
Temperature	36°C	Relative Humidity	25%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	57.9	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	24.1	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.1	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	10.1	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



END OF THE REPORT

Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1130	Report Date.	14.04.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A1- Project Location
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1130	Sample Received on	07.04.2025
Sample Collected by	LABORATORY	Test Commenced on	07.04.2025
Sample Collected on	02.04.2025	Test Completed on	14.04.2025
Temperature	36°C	Relative Humidity	27%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	61.1	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	29.6	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.0	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	8.9	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



END OF THE REPORT

Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1131	Report Date.	14.04.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A2-Sivalingapuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1131	Sample Received on	07.04.2025
Sample Collected by	LABORATORY	Test Commenced on	07.04.2025
Sample Collected on	02.04.2025	Test Completed on	14.04.2025
Temperature	34°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	53.1	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	27.4	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.6	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	8.4	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



END OF THE REPORT

Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1132	Report Date.	14.04.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A3-Ananthappanaickerpatti
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1132	Sample Received on	07.04.2025
Sample Collected by	LABORATORY	Test Commenced on	07.04.2025
Sample Collected on	03.04.2025	Test Completed on	14.04.2025
Temperature	34°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	48.7	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	23.1	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.7	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	8.5	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



END OF THE REPORT

Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1133	Report Date.	14.04.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

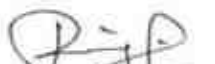
Sample Location	A4-Tenkarai
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1133	Sample Received on	07.04.2025
Sample Collected by	LABORATORY	Test Commenced on	07.04.2025
Sample Collected on	03.04.2025	Test Completed on	14.04.2025
Temperature	36°C	Relative Humidity	27%
Sample Condition	Fit for Analysis		

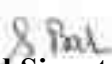
S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	46.6	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	22.9	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.7	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	8.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd


Verified




Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

END OF THE REPORT

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1134	Report Date.	14.04.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A3-Ananthappaickerpatti
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1134	Sample Received on	07.04.2025
Sample Collected by	LABORATORY	Test Commenced on	07.04.2025
Sample Collected on	04.04.2025	Test Completed on	14.04.2025
Temperature	36°C	Relative Humidity	27%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	56.7	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	26.8	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.8	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.9	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

END OF THE REPORT

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1135	Report Date.	14.04.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A4-Tenkarai
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1135	Sample Received on	07.04.2025
Sample Collected by	LABORATORY	Test Commenced on	07.04.2025
Sample Collected on	04.04.2025	Test Completed on	14.04.2025
Temperature	36°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	52.1	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	25.5	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.5	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.1	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



END OF THE REPORT

Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1136	Report Date.	14.04.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A5-Varagunaramapuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1136	Sample Received on	07.04.2025
Sample Collected by	LABORATORY	Test Commenced on	07.04.2025
Sample Collected on	05.04.2025	Test Completed on	14.04.2025
Temperature	36°C	Relative Humidity	26%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	40.8	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	20.0	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.2	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	7.4	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd


Verified



END OF THE REPORT


Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1137	Report Date.	14.04.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A6-A. Lakshmipuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1137	Sample Received on	07.04.2025
Sample Collected by	LABORATORY	Test Commenced on	07.04.2025
Sample Collected on	05.04.2025	Test Completed on	14.04.2025
Temperature	36°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	48.4	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	22.7	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.7	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.8	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



END OF THE REPORT

Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1138	Report Date.	14.04.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A5-Varagunaramapuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1138	Sample Received on	07.04.2025
Sample Collected by	LABORATORY	Test Commenced on	07.04.2025
Sample Collected on	06.04.2025	Test Completed on	14.04.2025
Temperature	35°C	Relative Humidity	32%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	45.4	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	22.2	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.1	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	8.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



END OF THE REPORT

Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.

LAB SERVICES FOR:- Food, Water, Milk, Environment, Academic & Industrial Segment.

CIN : U74999TN2017PTC116807 / GST No : 33AAYCS7325R1ZA / PAN No: AAYCS7325R

Page 11 of 12



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1139	Report Date.	14.04.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

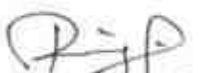
Sample Location	A6-A. Lakshmipuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1139	Sample Received on	07.04.2025
Sample Collected by	LABORATORY	Test Commenced on	07.04.2025
Sample Collected on	06.04.2025	Test Completed on	14.04.2025
Temperature	35°C	Relative Humidity	32%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	43.2	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	20.4	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.2	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	8.1	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd


Verified



END OF THE REPORT


S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1176	Report Date.	21.04.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A5-Varagunaramapuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1176	Sample Received on	14.04.2025
Sample Collected by	LABORATORY	Test Commenced on	14.04.2025
Sample Collected on	08.04.2025	Test Completed on	21.04.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	41.2	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	20.0	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.2	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	7.5	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

END OF THE REPORT

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1177	Report Date.	21.04.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A6-A. Lakshmipuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1177	Sample Received on	14.04.2025
Sample Collected by	LABORATORY	Test Commenced on	14.04.2025
Sample Collected on	08.04.2025	Test Completed on	21.04.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	41.2	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	19.4	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	3.7	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	7.7	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd


Verified



END OF THE REPORT


Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1178	Report Date.	21.04.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A5-Varagunaramapuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1178	Sample Received on	14.04.2025
Sample Collected by	LABORATORY	Test Commenced on	14.04.2025
Sample Collected on	09.04.2025	Test Completed on	21.04.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	46.6	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	22.6	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.3	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	8.5	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd


Verified




Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

END OF THE REPORT

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1179	Report Date.	21.04.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A6-A. Lakshmipuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1179	Sample Received on	14.04.2025
Sample Collected by	LABORATORY	Test Commenced on	14.04.2025
Sample Collected on	09.04.2025	Test Completed on	21.04.2025
Temperature	37°C	Relative Humidity	21%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	44.8	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	21.1	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.7	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	8.6	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd


Verified




Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

END OF THE REPORT

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1180	Report Date.	21.04.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A3-Ananthappaickerpatti
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1180	Sample Received on	14.04.2025
Sample Collected by	LABORATORY	Test Commenced on	14.04.2025
Sample Collected on	10.04.2025	Test Completed on	21.04.2025
Temperature	37°C	Relative Humidity	23%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	67.1	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	31.7	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	8.2	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	12.4	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

END OF THE REPORT

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.

LAB SERVICES FOR:- Food, Water, Milk, Environment, Academic & Industrial Segment.

CIN : U74999TN2017PTC116807 / GST No : 33AAYCS7325R1ZA / PAN No: AAYCS7325R



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1181	Report Date.	21.04.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A4-Tenkarai
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1181	Sample Received on	14.04.2025
Sample Collected by	LABORATORY	Test Commenced on	14.04.2025
Sample Collected on	10.04.2025	Test Completed on	21.04.2025
Temperature	37°C	Relative Humidity	23%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	61.9	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	30.2	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	7.1	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	11.1	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



END OF THE REPORT

Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1182	Report Date.	21.04.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A3-Ananthappaickerpatti
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1182	Sample Received on	14.04.2025
Sample Collected by	LABORATORY	Test Commenced on	14.04.2025
Sample Collected on	11.04.2025	Test Completed on	21.04.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	62.3	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	29.5	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.5	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	11.5	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd


Verified




Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

END OF THE REPORT

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1183	Report Date.	21.04.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A4-Tenkarai
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1183	Sample Received on	14.04.2025
Sample Collected by	LABORATORY	Test Commenced on	14.04.2025
Sample Collected on	11.04.2025	Test Completed on	21.04.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	57.7	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	28.2	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.4	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	10.0	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



END OF THE REPORT

Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1184	Report Date.	21.04.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A1- Project Location
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1184	Sample Received on	14.04.2025
Sample Collected by	LABORATORY	Test Commenced on	14.04.2025
Sample Collected on	12.04.2025	Test Completed on	21.04.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	53.9	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	27.4	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.7	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	8.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd


Verified




Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

END OF THE REPORT

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1185	Report Date.	21.04.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A2-Sivalingapuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1185	Sample Received on	14.04.2025
Sample Collected by	LABORATORY	Test Commenced on	14.04.2025
Sample Collected on	12.04.2025	Test Completed on	21.04.2025
Temperature	35°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	52.1	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	26.9	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.4	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	8.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL –Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

END OF THE REPORT

Please Contact:

For any Technical Issues&Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1186	Report Date.	21.04.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A1- Project Location
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1186	Sample Received on	14.04.2025
Sample Collected by	LABORATORY	Test Commenced on	14.04.2025
Sample Collected on	13.04.2025	Test Completed on	21.04.2025
Temperature	35°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	60.2	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	29.3	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.9	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	8.8	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

END OF THE REPORT

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1187	Report Date.	21.04.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A2-Sivalingapuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1187	Sample Received on	14.04.2025
Sample Collected by	LABORATORY	Test Commenced on	14.04.2025
Sample Collected on	13.04.2025	Test Completed on	21.04.2025
Temperature	35°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	49.9	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	23.6	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.9	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.8	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



END OF THE REPORT

Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1224	Report Date.	28.04.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A1- Project Location
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1224	Sample Received on	21.04.2025
Sample Collected by	LABORATORY	Test Commenced on	21.04.2025
Sample Collected on	15.04.2025	Test Completed on	28.04.2025
Temperature	36°C	Relative Humidity	25%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	66.5	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	32.3	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.6	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.4	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL(D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

END OF THE REPORT

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1225	Report Date.	28.04.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A2-Sivalingapuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1225	Sample Received on	21.04.2025
Sample Collected by	LABORATORY	Test Commenced on	21.04.2025
Sample Collected on	15.04.2025	Test Completed on	28.04.2025
Temperature	36°C	Relative Humidity	25%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	53.6	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	25.3	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.1	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	7.9	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



END OF THE REPORT

Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1226	Report Date.	28.04.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A1- Project Location
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1226	Sample Received on	21.04.2025
Sample Collected by	LABORATORY	Test Commenced on	21.04.2025
Sample Collected on	16.04.2025	Test Completed on	28.04.2025
Temperature	36°C	Relative Humidity	27%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	71.6	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	34.8	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	7.3	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	10.0	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



END OF THE REPORT

Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1227	Report Date.	28.04.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

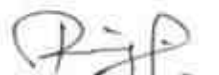
Sample Location	A2-Sivalingapuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1227	Sample Received on	21.04.2025
Sample Collected by	LABORATORY	Test Commenced on	21.04.2025
Sample Collected on	16.04.2025	Test Completed on	28.04.2025
Temperature	34°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	55.4	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	29.1	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.2	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.0	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd


Verified




Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

END OF THE REPORT

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1228	Report Date.	28.04.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A3-Ananthappanaickerpatti
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1228	Sample Received on	21.04.2025
Sample Collected by	LABORATORY	Test Commenced on	21.04.2025
Sample Collected on	17.04.2025	Test Completed on	28.04.2025
Temperature	34°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	57.8	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	27.2	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.9	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	10.1	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



END OF THE REPORT

Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1229	Report Date.	28.04.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

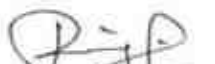
Sample Location	A4-Tenkarai
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1229	Sample Received on	21.04.2025
Sample Collected by	LABORATORY	Test Commenced on	21.04.2025
Sample Collected on	17.04.2025	Test Completed on	28.04.2025
Temperature	36°C	Relative Humidity	27%
Sample Condition	Fit for Analysis		

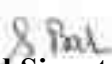
S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	47.2	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	23.2	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.8	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	8.4	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd


Verified




Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

END OF THE REPORT

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/120630	Report Date.	28.04.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A3-Ananthappaickerpatti
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-120630	Sample Received on	21.04.2025
Sample Collected by	LABORATORY	Test Commenced on	21.04.2025
Sample Collected on	18.04.2025	Test Completed on	28.04.2025
Temperature	36°C	Relative Humidity	27%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	63.9	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	30.2	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.8	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	11.7	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

END OF THE REPORT

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1231	Report Date.	28.04.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A4-Tenkarai
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1231	Sample Received on	21.04.2025
Sample Collected by	LABORATORY	Test Commenced on	21.04.2025
Sample Collected on	18.04.2025	Test Completed on	28.04.2025
Temperature	36°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	53.9	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	26.4	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.8	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.4	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd


Verified




Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

END OF THE REPORT

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1232	Report Date.	28.04.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A5-Varagunaramapuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1232	Sample Received on	21.04.2025
Sample Collected by	LABORATORY	Test Commenced on	21.04.2025
Sample Collected on	19.04.2025	Test Completed on	28.04.2025
Temperature	36°C	Relative Humidity	26%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	43.0	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	20.9	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.7	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	7.8	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



END OF THE REPORT

S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1233	Report Date.	28.04.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A6-A. Lakshmipuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1233	Sample Received on	21.04.2025
Sample Collected by	LABORATORY	Test Commenced on	21.04.2025
Sample Collected on	19.04.2025	Test Completed on	28.04.2025
Temperature	36°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	49.2	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	23.1	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.8	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.7	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd


Verified




Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

END OF THE REPORT

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1234	Report Date.	28.04.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A5-Varagunaramapuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1234	Sample Received on	21.04.2025
Sample Collected by	LABORATORY	Test Commenced on	21.04.2025
Sample Collected on	20.04.2025	Test Completed on	28.04.2025
Temperature	35°C	Relative Humidity	32%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	47.8	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	23.2	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.5	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	8.7	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



END OF THE REPORT

Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.

LAB SERVICES FOR:- Food, Water, Milk, Environment, Academic & Industrial Segment.

CIN : U74999TN2017PTC116807 / GST No : 33AAYCS7325R1ZA / PAN No: AAYCS7325R



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1235	Report Date.	28.04.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

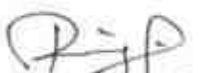
Sample Location	A6-A. Lakshmipuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1235	Sample Received on	21.04.2025
Sample Collected by	LABORATORY	Test Commenced on	21.04.2025
Sample Collected on	20.04.2025	Test Completed on	28.04.2025
Temperature	35°C	Relative Humidity	32%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	46.4	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	21.8	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.1	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.0	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd


Verified



END OF THE REPORT


S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1272	Report Date.	05.05.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A5-Varagunaramapuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1272	Sample Received on	29.04.2025
Sample Collected by	LABORATORY	Test Commenced on	29.04.2025
Sample Collected on	22.04.2025	Test Completed on	05.05.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	46.1	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	22.4	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.2	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	8.4	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



END OF THE REPORT

Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1273	Report Date.	05.05.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A6-A. Lakshmipuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1273	Sample Received on	29.04.2025
Sample Collected by	LABORATORY	Test Commenced on	29.04.2025
Sample Collected on	22.04.2025	Test Completed on	05.05.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	42.4	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	20.0	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.0	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	7.9	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



END OF THE REPORT

Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1274	Report Date.	05.05.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A5-Varagunaramapuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1274	Sample Received on	29.04.2025
Sample Collected by	LABORATORY	Test Commenced on	29.04.2025
Sample Collected on	23.04.2025	Test Completed on	05.05.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	50.2	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	24.6	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.0	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.1	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



Authorized Signatory

S. BALAMURUGAN
Asst. Technical Manager

END OF THE REPORT

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1275	Report Date.	05.05.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A6-A. Lakshmipuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1275	Sample Received on	29.04.2025
Sample Collected by	LABORATORY	Test Commenced on	29.04.2025
Sample Collected on	23.04.2025	Test Completed on	05.05.2025
Temperature	37°C	Relative Humidity	21%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	46.0	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	21.6	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.0	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	8.9	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

END OF THE REPORT

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1276	Report Date.	05.05.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A3-Ananthappaickerpatti
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1276	Sample Received on	29.04.2025
Sample Collected by	LABORATORY	Test Commenced on	29.04.2025
Sample Collected on	24.04.2025	Test Completed on	05.05.2025
Temperature	37°C	Relative Humidity	23%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	51.9	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	24.6	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.1	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	8.9	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

END OF THE REPORT

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1277	Report Date.	05.05.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A4-Tenkarai
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1277	Sample Received on	29.04.2025
Sample Collected by	LABORATORY	Test Commenced on	29.04.2025
Sample Collected on	24.04.2025	Test Completed on	05.05.2025
Temperature	37°C	Relative Humidity	23%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	45.8	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	22.5	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.5	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	8.1	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



END OF THE REPORT

Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1278	Report Date.	05.05.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A3-Ananthappaickerpatti
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1278	Sample Received on	29.04.2025
Sample Collected by	LABORATORY	Test Commenced on	29.04.2025
Sample Collected on	25.04.2025	Test Completed on	05.05.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	59.1	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	27.9	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.1	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	10.5	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd


Verified




Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

END OF THE REPORT

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1279	Report Date.	05.05.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A4-Tenkarai
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1279	Sample Received on	29.04.2025
Sample Collected by	LABORATORY	Test Commenced on	29.04.2025
Sample Collected on	25.04.2025	Test Completed on	05.05.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	50.0	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	24.5	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.2	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	8.8	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



END OF THE REPORT

Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1280	Report Date.	05.05.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

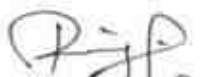
Sample Location	A1- Project Location
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1280	Sample Received on	29.04.2025
Sample Collected by	LABORATORY	Test Commenced on	29.04.2025
Sample Collected on	26.04.2025	Test Completed on	05.05.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	57.5	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	27.9	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.6	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	8.5	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd


Verified




Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

END OF THE REPORT

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1281	Report Date.	05.05.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A2-Sivalingapuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1281	Sample Received on	29.04.2025
Sample Collected by	LABORATORY	Test Commenced on	29.04.2025
Sample Collected on	26.04.2025	Test Completed on	05.05.2025
Temperature	35°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	48.7	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	23.1	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.7	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.7	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL –Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd


Verified




Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

END OF THE REPORT

Please Contact:

For any Technical Issues&Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.

LAB SERVICES FOR:- Food, Water, Milk, Environment, Academic & Industrial Segment.

CIN : U74999TN2017PTC116807 / GST No : 33AAYCS7325R1ZA / PAN No: AAYCS7325R

Page 10 of 12



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1282	Report Date.	05.05.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A1- Project Location
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1282	Sample Received on	29.04.2025
Sample Collected by	LABORATORY	Test Commenced on	29.04.2025
Sample Collected on	27.04.2025	Test Completed on	05.05.2025
Temperature	35°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	62.9	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	30.5	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.3	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.1	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

END OF THE REPORT

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1283	Report Date.	05.05.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A2-Sivalingapuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1283	Sample Received on	29.04.2025
Sample Collected by	LABORATORY	Test Commenced on	29.04.2025
Sample Collected on	27.04.2025	Test Completed on	05.05.2025
Temperature	35°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	50.3	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	23.9	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.0	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.9	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



END OF THE REPORT

Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1320	Report Date.	12.05.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A1- Project Location
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1320	Sample Received on	05.05.2025
Sample Collected by	LABORATORY	Test Commenced on	05.05.2025
Sample Collected on	29.04.2025	Test Completed on	12.05.2025
Temperature	36°C	Relative Humidity	25%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	68.3	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	33.1	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.9	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.7	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL(D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd


Verified




Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

END OF THE REPORT

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1321	Report Date.	12.05.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A2-Sivalingapuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1321	Sample Received on	05.05.2025
Sample Collected by	LABORATORY	Test Commenced on	05.05.2025
Sample Collected on	29.04.2025	Test Completed on	12.05.2025
Temperature	36°C	Relative Humidity	25%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	48.6	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	23.6	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.9	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	8.7	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



END OF THE REPORT

Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1322	Report Date.	12.05.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A1- Project Location
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1322	Sample Received on	05.05.2025
Sample Collected by	LABORATORY	Test Commenced on	05.05.2025
Sample Collected on	30.04.2025	Test Completed on	12.05.2025
Temperature	36°C	Relative Humidity	27%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	74.4	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	36.0	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	7.6	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	10.3	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



END OF THE REPORT

Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1323	Report Date.	12.05.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A2-Sivalingapuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1323	Sample Received on	05.05.2025
Sample Collected by	LABORATORY	Test Commenced on	05.05.2025
Sample Collected on	30.04.2025	Test Completed on	12.05.2025
Temperature	34°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	49.1	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	23.3	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.8	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.8	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



END OF THE REPORT

Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1324	Report Date.	12.05.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A3-Ananthappanaickerpatti
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1324	Sample Received on	05.05.2025
Sample Collected by	LABORATORY	Test Commenced on	05.05.2025
Sample Collected on	01.05.2025	Test Completed on	12.05.2025
Temperature	34°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	51.1	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	24.2	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.0	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	8.8	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



END OF THE REPORT

Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1325	Report Date.	12.05.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

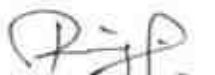
Sample Location	A4-Tenkarai
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1325	Sample Received on	05.05.2025
Sample Collected by	LABORATORY	Test Commenced on	05.05.2025
Sample Collected on	01.05.2025	Test Completed on	12.05.2025
Temperature	36°C	Relative Humidity	27%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	59.8	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	29.2	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.8	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	10.5	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd


Verified




Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

END OF THE REPORT

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1326	Report Date.	12.05.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A3-Ananthappaickerpatti
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1326	Sample Received on	05.05.2025
Sample Collected by	LABORATORY	Test Commenced on	05.05.2025
Sample Collected on	02.05.2025	Test Completed on	12.05.2025
Temperature	36°C	Relative Humidity	27%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	52.7	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	25.0	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.2	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.0	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd


Verified




Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

END OF THE REPORT

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1327	Report Date.	12.05.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A4-Tenkarai
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1327	Sample Received on	05.05.2025
Sample Collected by	LABORATORY	Test Commenced on	05.05.2025
Sample Collected on	02.05.2025	Test Completed on	12.05.2025
Temperature	36°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	56.3	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	27.5	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.2	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.8	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



END OF THE REPORT

S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1328	Report Date.	12.05.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A5-Varagunaramapuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1328	Sample Received on	05.05.2025
Sample Collected by	LABORATORY	Test Commenced on	05.05.2025
Sample Collected on	03.05.2025	Test Completed on	12.05.2025
Temperature	36°C	Relative Humidity	26%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	41.8	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	20.4	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.4	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	7.6	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd


Verified



END OF THE REPORT


Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1329	Report Date.	12.05.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A6-A. Lakshmipuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1329	Sample Received on	05.05.2025
Sample Collected by	LABORATORY	Test Commenced on	05.05.2025
Sample Collected on	03.05.2025	Test Completed on	12.05.2025
Temperature	36°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	51.6	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	24.3	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.5	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	10.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



END OF THE REPORT

Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1330	Report Date.	12.05.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

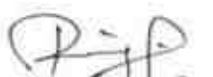
Sample Location	A5-Varagunaramapuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1330	Sample Received on	05.05.2025
Sample Collected by	LABORATORY	Test Commenced on	05.05.2025
Sample Collected on	04.05.2025	Test Completed on	12.05.2025
Temperature	35°C	Relative Humidity	32%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	48.4	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	23.5	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.9	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	8.8	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd


Verified




Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

END OF THE REPORT

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1331	Report Date.	12.05.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

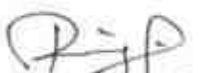
Sample Location	A6-A. Lakshmipuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1331	Sample Received on	05.05.2025
Sample Collected by	LABORATORY	Test Commenced on	05.05.2025
Sample Collected on	04.05.2025	Test Completed on	12.05.2025
Temperature	35°C	Relative Humidity	32%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	48.0	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	22.5	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.5	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.5	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd


Verified




Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

END OF THE REPORT

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1368	Report Date.	19.05.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A5-Varagunaramapuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1368	Sample Received on	12.05.2025
Sample Collected by	LABORATORY	Test Commenced on	12.05.2025
Sample Collected on	06.05.2025	Test Completed on	19.05.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	53.2	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	26.0	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.5	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.7	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd


Verified




Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

END OF THE REPORT

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1369	Report Date.	19.05.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A6-A. Lakshmipuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1369	Sample Received on	12.05.2025
Sample Collected by	LABORATORY	Test Commenced on	12.05.2025
Sample Collected on	06.05.2025	Test Completed on	19.05.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	44.0	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	20.7	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.4	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	8.4	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



END OF THE REPORT

Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1370	Report Date.	19.05.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A5-Varagunaramapuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1370	Sample Received on	12.05.2025
Sample Collected by	LABORATORY	Test Commenced on	12.05.2025
Sample Collected on	07.05.2025	Test Completed on	19.05.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	49.0	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	23.8	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.8	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	8.9	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



Authorized Signatory

S. BALAMURUGAN
Asst. Technical Manager

END OF THE REPORT

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.

LAB SERVICES FOR:- Food, Water, Milk, Environment, Academic & Industrial Segment.

CIN : U74999TN2017PTC116807 / GST No : 33AAYCS7325R1ZA / PAN No: AAYCS7325R



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1371	Report Date.	19.05.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A6-A. Lakshmipuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1371	Sample Received on	12.05.2025
Sample Collected by	LABORATORY	Test Commenced on	12.05.2025
Sample Collected on	07.05.2025	Test Completed on	19.05.2025
Temperature	37°C	Relative Humidity	21%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	45.6	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	21.4	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.9	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	8.8	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

END OF THE REPORT

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1372	Report Date.	19.05.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A3-Ananthappaickerpatti
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1372	Sample Received on	12.05.2025
Sample Collected by	LABORATORY	Test Commenced on	12.05.2025
Sample Collected on	08.05.2025	Test Completed on	19.05.2025
Temperature	37°C	Relative Humidity	23%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	67.7	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	31.9	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	8.4	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	12.6	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

END OF THE REPORT

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1373	Report Date.	19.05.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A4-Tenkarai
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1373	Sample Received on	12.05.2025
Sample Collected by	LABORATORY	Test Commenced on	12.05.2025
Sample Collected on	08.05.2025	Test Completed on	19.05.2025
Temperature	37°C	Relative Humidity	23%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	47.9	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	23.5	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.9	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	8.5	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



END OF THE REPORT

Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1374	Report Date.	19.05.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A3-Ananthappaickerpatti
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1374	Sample Received on	12.05.2025
Sample Collected by	LABORATORY	Test Commenced on	12.05.2025
Sample Collected on	09.05.2025	Test Completed on	19.05.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	63.1	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	29.8	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.7	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	11.5	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd


Verified




Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

END OF THE REPORT

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1375	Report Date.	19.05.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A4-Tenkarai
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1375	Sample Received on	12.05.2025
Sample Collected by	LABORATORY	Test Commenced on	12.05.2025
Sample Collected on	09.05.2025	Test Completed on	19.05.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	54.2	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	26.5	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.9	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.5	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



END OF THE REPORT

Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1376	Report Date.	19.05.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A1- Project Location
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1376	Sample Received on	12.05.2025
Sample Collected by	LABORATORY	Test Commenced on	12.05.2025
Sample Collected on	10.05.2025	Test Completed on	19.05.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	70.1	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	34.0	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	7.0	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.8	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



END OF THE REPORT

Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1377	Report Date.	19.05.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A2-Sivalingapuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1377	Sample Received on	12.05.2025
Sample Collected by	LABORATORY	Test Commenced on	12.05.2025
Sample Collected on	10.05.2025	Test Completed on	19.05.2025
Temperature	35°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	53.1	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	25.2	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.4	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	10.5	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL –Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd


Verified




Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

END OF THE REPORT

Please Contact:

For any Technical Issues&Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.

LAB SERVICES FOR:- Food, Water, Milk, Environment, Academic & Industrial Segment.

CIN : U74999TN2017PTC116807 / GST No : 33AAYCS7325R1ZA / PAN No: AAYCS7325R

Page 10 of 12



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1378	Report Date.	19.05.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A1- Project Location
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1378	Sample Received on	12.05.2025
Sample Collected by	LABORATORY	Test Commenced on	12.05.2025
Sample Collected on	11.05.2025	Test Completed on	19.05.2025
Temperature	35°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	58.4	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	28.3	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.7	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	8.7	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

END OF THE REPORT

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1379	Report Date.	19.05.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A2-Sivalingapuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1379	Sample Received on	12.05.2025
Sample Collected by	LABORATORY	Test Commenced on	12.05.2025
Sample Collected on	11.05.2025	Test Completed on	19.05.2025
Temperature	35°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	47.3	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	22.5	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.5	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.4	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



END OF THE REPORT

Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.

LAB SERVICES FOR:- Food, Water, Milk, Environment, Academic & Industrial Segment.

CIN : U74999TN2017PTC116807 / GST No : 33AAYCS7325R1ZA / PAN No: AAYCS7325R

Page 12 of 12



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1416	Report Date.	26.05.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A1- Project Location
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1416	Sample Received on	19.05.2025
Sample Collected by	LABORATORY	Test Commenced on	19.05.2025
Sample Collected on	13.05.2025	Test Completed on	26.05.2025
Temperature	36°C	Relative Humidity	25%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	62.0	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	30.1	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.2	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.0	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL(D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



END OF THE REPORT

Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1417	Report Date.	26.05.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A2-Sivalingapuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1417	Sample Received on	19.05.2025
Sample Collected by	LABORATORY	Test Commenced on	19.05.2025
Sample Collected on	13.05.2025	Test Completed on	26.05.2025
Temperature	36°C	Relative Humidity	25%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	51.8	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	25.0	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.3	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	8.1	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



END OF THE REPORT

Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1418	Report Date.	26.05.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A1- Project Location
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-148	Sample Received on	19.05.2025
Sample Collected by	LABORATORY	Test Commenced on	19.05.2025
Sample Collected on	14.05.2025	Test Completed on	26.05.2025
Temperature	36°C	Relative Humidity	27%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	56.6	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	27.5	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.5	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	8.4	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



END OF THE REPORT

Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1419	Report Date.	26.05.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A2-Sivalingapuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1419	Sample Received on	19.05.2025
Sample Collected by	LABORATORY	Test Commenced on	19.05.2025
Sample Collected on	14.05.2025	Test Completed on	26.05.2025
Temperature	34°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	54.0	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	27.1	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.9	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	8.8	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



S. BALAMURUGAN
Asst. Technical Manager

END OF THE REPORT

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1420	Report Date.	26.05.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A3-Ananthappanaickerpatti
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1420	Sample Received on	19.05.2025
Sample Collected by	LABORATORY	Test Commenced on	19.05.2025
Sample Collected on	15.05.2025	Test Completed on	26.05.2025
Temperature	34°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	49.6	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	23.5	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.9	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	8.7	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



END OF THE REPORT

Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1397	Report Date.	26.05.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A4-Tenkarai
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1397	Sample Received on	19.05.2025
Sample Collected by	LABORATORY	Test Commenced on	19.05.2025
Sample Collected on	15.05.2025	Test Completed on	26.05.2025
Temperature	36°C	Relative Humidity	27%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	48.7	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	23.9	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.0	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	8.6	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



END OF THE REPORT

Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1398	Report Date.	26.05.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

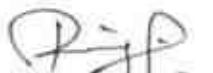
Sample Location	A3-Ananthappaickerpatti
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1398	Sample Received on	19.05.2025
Sample Collected by	02.05.2025	Test Commenced on	19.05.2025
Sample Collected on	16.05.2025	Test Completed on	26.05.2025
Temperature	36°C	Relative Humidity	27%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	53.7	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	25.4	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.3	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.1	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd


Verified




Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

END OF THE REPORT

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1399	Report Date.	26.05.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A4-Tenkarai
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1399	Sample Received on	19.05.2025
Sample Collected by	LABORATORY	Test Commenced on	19.05.2025
Sample Collected on	16.05.2025	Test Completed on	26.05.2025
Temperature	36°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	55.0	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	26.9	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.0	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.6	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

END OF THE REPORT

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1400	Report Date.	26.05.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A5-Varagunaramapuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1400	Sample Received on	19.05.2025
Sample Collected by	LABORATORY	Test Commenced on	19.05.2025
Sample Collected on	17.05.2025	Test Completed on	26.05.2025
Temperature	36°C	Relative Humidity	26%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	44.2	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	21.6	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.9	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	8.0	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



END OF THE REPORT

S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1401	Report Date.	26.05.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A6-A. Lakshmipuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1401	Sample Received on	19.05.2025
Sample Collected by	LABORATORY	Test Commenced on	19.05.2025
Sample Collected on	17.05.2025	Test Completed on	26.05.2025
Temperature	36°C	Relative Humidity	28%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	42.8	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	20.1	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.1	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	8.0	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

END OF THE REPORT

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1402	Report Date.	26.05.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A5-Varagunaramapuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1402	Sample Received on	19.05.2025
Sample Collected by	LABORATORY	Test Commenced on	19.05.2025
Sample Collected on	18.05.2025	Test Completed on	26.05.2025
Temperature	35°C	Relative Humidity	32%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	52.0	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	25.5	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.3	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.5	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

END OF THE REPORT

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1403	Report Date.	26.05.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

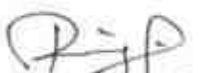
Sample Location	A6-A. Lakshmipuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1403	Sample Received on	19.05.2025
Sample Collected by	LABORATORY	Test Commenced on	19.05.2025
Sample Collected on	18.05.2025	Test Completed on	26.05.2025
Temperature	35°C	Relative Humidity	32%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	44.4	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	20.9	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.5	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	8.5	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd


Verified



END OF THE REPORT


S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1455	Report Date.	02.06.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A5-Varagunaramapuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1455	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	20.05.2025	Test Completed on	02.06.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	53.8	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	26.7	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.8	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	10.5	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



END OF THE REPORT

Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1456	Report Date.	02.06.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A6-A. Lakshmipuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1456	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	20.05.2025	Test Completed on	02.06.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	50.0	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	23.5	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.9	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.8	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL –Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



END OF THE REPORT

Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

For any Technical Issues&Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1457	Report Date.	02.06.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A5-Varagunaramapuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1457	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	21.05.2025	Test Completed on	02.06.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	49.6	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	24.0	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.9	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.0	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



Authorized Signatory

S. BALAMURUGAN
Asst. Technical Manager

END OF THE REPORT

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1458	Report Date.	02.06.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A6-A. Lakshmipuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1458	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	21.05.2025	Test Completed on	02.06.2025
Temperature	37°C	Relative Humidity	21%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	46.8	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	22.0	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.2	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.1	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



END OF THE REPORT

Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1459	Report Date.	02.06.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A3-Ananthappaickerpatti
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1459	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	22.05.2025	Test Completed on	02.06.2025
Temperature	37°C	Relative Humidity	23%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	64.7	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	30.5	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	7.1	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	11.9	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



END OF THE REPORT

Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1460	Report Date.	02.06.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A4-Tenkarai
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1460	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	22.05.2025	Test Completed on	02.06.2025
Temperature	37°C	Relative Humidity	23%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	61.2	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	29.9	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	7.0	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	10.9	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



END OF THE REPORT

Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1461	Report Date.	02.06.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A3-Ananthappaickerpatti
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1461	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	23.05.2025	Test Completed on	02.06.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	60.7	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	28.7	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.3	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	10.8	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd


Verified




Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

END OF THE REPORT

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1462	Report Date.	02.06.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A4-Tenkarai
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1462	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	23.05.2025	Test Completed on	02.06.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	57.0	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	27.9	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	6.3	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.9	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



END OF THE REPORT

Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1463	Report Date.	02.06.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A1- Project Location
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1463	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	24.05.2025	Test Completed on	02.06.2025
Temperature	36°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	76.0	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	37.0	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	7.6	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	11.2	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



END OF THE REPORT

Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1464	Report Date.	02.06.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A2-Sivalingapuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1464	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	24.05.2025	Test Completed on	02.06.2025
Temperature	35°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	49.6	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	23.7	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	4.2	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	8.0	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL –Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

END OF THE REPORT

Please Contact:

For any Technical Issues&Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1465	Report Date.	02.06.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A1- Project Location
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1465	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	25.05.2025	Test Completed on	02.06.2025
Temperature	35°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	72.3	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	35.0	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	7.0	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	10.1	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

END OF THE REPORT

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, DhargasRoad, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: -info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1466	Report Date.	02.06.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	AMBIENT AIR QUALITY
Sampling Procedure	IS – 5182 (Part – 14: 2000 & Part – V: Reaffirmed - 2003), CPCB Guide lines

Sample Location	A2-Sivalingapuram
Positioned height of Sampler	1.5 M above Ground Level

Customer Reference	By Mail	Sampling Duration	24 hrs
Sample Reference No	SARL/A/CHE-1466	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	25.05.2025	Test Completed on	02.06.2025
Temperature	35°C	Relative Humidity	30%
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results	*Limits
1	Particulate Matter less than 10micron size (PM ₁₀)	IS:5182: Part 23:2006	µg/m ³	53.1	100
2	Particulate Matter less than 2.5micron size (PM _{2.5})	IS 5182 (Part 24):2019	µg/m ³	27.1	60
3	Sulphur dioxide (SO ₂)	IS:5182: Part 02:2001	µg/m ³	5.3	80
4	Nitrogen Dioxide (NO ₂)	IS:5182: Part 06:2006	µg/m ³	9.1	80
5	Carbon monoxide (CO)	SARL/IOP/013 (Issue No:01, Issue Date – 01.03.2023)	mg/m ³	BDL (D.L – 1.1)	-

Remarks: Limits: *National Ambient air quality standards from CPCB. BDL- Below detectable limit. DL – Detectable limit

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



END OF THE REPORT

Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, Dhargas Road, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: - info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1522

Report Date.	02.06.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	WATER
Sample Mark	GW1-Project Location

Customer Reference	By Mail	Sampling Procedure	IS 17614: Part 14: 2021
Sample Reference No	SARL/W/CHE-1522	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	25.05.2025	Test Completed on	02.06.2025
Sample Condition	Fit for Analysis		

Sl. No.	Parameters	Protocol	Unit	Result	*Limits
					Permissible
A.	Physical parameters				
1	Odour	IS 3025 (Part 5): 2018	-	AGREEABLE	Agreeable
2	Turbidity	APHA 24 th Edition 2130 B: 2023	NTU	<1	5.0
3	pH at 25 °C	APHA 24 th Edition 4500 – H+ B: 2023	-	7.58	6.50-8.50
4	Electrical Conductivity	APHA 24 th Edition 2510 B: 2023	(µS/cm)	984.5	-
B.	Chemical parameters				
5	Total Dissolved Solids	APHA 24th Edition 2540-C: 2023	mg/L	592	2000
6	Total hardness (as CaCO3)	APHA 24th Edition 2340 C: 2023	mg/L	322	600
7	Calcium (as Ca)	IS 3025 (Part 40): 1991	mg/L	71.6	200
8	Magnesium (as Mg)	IS 3025 (Part 46): 1994	mg/L	34.3	100
9	Calcium Hardness (as CaCO3)	APHA 24th Edition 3500 Ca B: 2023	mg/L	179	-
10	Magnesium Hardness (as CaCO3)	APHA 24th Edition 3500 Mg B: 2023	mg/L	143	-
11	Total alkalinity (as CaCO3)	APHA 24th Edition 2320 B: 2023	mg/L	286	600
12	Chloride (as Cl)	APHA 24th Edition 4500 Cl- B: 2023	mg/L	79.6	1000



Shrient Analytical and Research Labs Pvt. Ltd

416/15, Dhargas Road, West Tambaram, Chennai- 600045

Phone Number +91 82208 36377 Email: - info@shrientanalytical.com

www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1522

Report Date.	02.06.2025

Sl. No	Parameters	Protocol	Unit	Result	*Limits
					Permissible
13	Free Residual chlorine	APHA 24th Edition 4500 Cl- B: 2023	mg/L	BDL (D.L - 0.2)	1.0
14	Sulphate as (SO ₄ 2-)	APHA 24th Edition 4500 SO ₄ 2- E: 2023	mg/L	192	400
15	Iron (as Fe)	APHA 24th Edition 3500 Fe B: 2023	mg/L	0.08	0.3
16	Nitrate (as NO ₃)	IS 3025 (Part 34): 1988	mg/L	5.32	45
17	Fluoride (as F)	APHA 24th Edition 4500 F- D: 2023	mg/L	0.52	1.5
18	Manganese (as Mn)	APHA 24th Edition 3500 Mn B: 2023	mg/L	BDL (D.L - 0.05)	0.3

Remarks: *Drinking Water Specifications as per IS - 10500:2012. BDL - Below Detectable limit (DL - Detectable limit).

For Shrient Analytical and Research Labs Pvt. Ltd


Verified



END OF THE REPORT


Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.

LAB SERVICES FOR:- Food, Water, Milk, Environment, Academic & Industrial Segment.

CIN : U74999TN2017PTC116807 / GST No : 33AAYCS7325R1ZA / PAN No: AAYCS7325R

Page 2 of 2



Shrient Analytical and Research Labs Pvt. Ltd

416/15, Dhargas Road, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: - info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1523

Report Date.	02.06.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	WATER
Sample Mark	GW2-Sivalingapuram

Customer Reference	By Mail	Sampling Procedure	IS 17614: Part 14: 2021
Sample Reference No	SARL/W/CHE-1523	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	25.05.2025	Test Completed on	02.06.2025
Sample Condition	Fit for Analysis		

Sl. No.	Parameters	Protocol	Unit	Result	*Limits
					Permissible
A.	Physical parameters				
1	Odour	IS 3025 (Part 5): 2018	-	Agreeable	Agreeable
2	Turbidity	APHA 24 th Edition 2130 B: 2023	NTU	<1	5.0
3	pH at 25 °C	APHA 24 th Edition 4500 – H+ B: 2023	-	7.36	6.50-8.50
4	Electrical Conductivity	APHA 24 th Edition 2510 B: 2023	(µS/cm)	936.2	-
B.	Chemical parameters				
5	Total Dissolved Solids	APHA 24th Edition 2540-C: 2023	mg/L	562	2000
6	Total hardness (as CaCO3)	APHA 24th Edition 2340 C: 2023	mg/L	396	600
7	Calcium (as Ca)	IS 3025 (Part 40): 1991	mg/L	84.8	200
8	Magnesium (as Mg)	IS 3025 (Part 46): 1994	mg/L	44.2	100
9	Calcium Hardness (as CaCO3)	APHA 24th Edition 3500 Ca B: 2023	mg/L	212	-
10	Magnesium Hardness (as CaCO3)	APHA 24th Edition 3500 Mg B: 2023	mg/L	184	-
11	Total alkalinity (as CaCO3)	APHA 24th Edition 2320 B: 2023	mg/L	308	600
12	Chloride (as Cl)	APHA 24th Edition 4500 Cl- B: 2023	mg/L	160	1000



Shrient Analytical and Research Labs Pvt. Ltd

416/15, Dhargas Road, West Tambaram, Chennai- 600045

Phone Number +91 82208 36377 Email: - info@shrientanalytical.com

www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1468

Report Date.	02.06.2025

Sl. No	Parameters	Protocol	Unit	Result	*Limits
					Permissible
13	Free Residual chlorine	APHA 24th Edition 4500 Cl- B: 2023	mg/L	BDL(D.L-0.2)	1.0
14	Sulphate as (SO ₄ ²⁻)	APHA 24th Edition 4500 SO ₄ ²⁻ E: 2023	mg/L	24.5	400
15	Iron (as Fe)	APHA 24th Edition 3500 Fe B: 2023	mg/L	0.05	0.3
16	Nitrate (as NO ₃)	IS 3025 (Part 34): 1988	mg/L	1.95	45
17	Fluoride (as F)	APHA 24th Edition 4500 F- D: 2023	mg/L	0.48	1.5
18	Manganese (as Mn)	APHA 24th Edition 3500 Mn B: 2023	mg/L	BDL(D.L-0.05)	0.3

Remarks: *Drinking Water Specifications as per IS – 10500:2012. BDL – Below Detectable limit (DL - Detectable limit).

For Shrient Analytical and Research Labs Pvt. Ltd


Verified



END OF THE REPORT


Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.

LAB SERVICES FOR:- Food, Water, Milk, Environment, Academic & Industrial Segment.

CIN : U74999TN2017PTC116807 / GST No : 33AAYCS7325R1ZA / PAN No: AAYCS7325R

Page 2 of 2



Shrient Analytical and Research Labs Pvt. Ltd

416/15, Dhargas Road, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: - info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1524

Report Date.	02.06.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	WATER
Sample Mark	GW3-Ananthappaickerpatti

Customer Reference	By Mail	Sampling Procedure	IS 17614: Part 14: 2021
Sample Reference No	SARL/W/CHE-1469	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	25.05.2025	Test Completed on	02.06.2025
Sample Condition	Fit for Analysis		

Sl. No.	Parameters	Protocol	Unit	Result	*Limits
					Permissible
A.	Physical parameters				
1	Odour	IS 3025 (Part 5): 2018	-	Agreeable	Agreeable
2	Turbidity	APHA 24 th Edition 2130 B: 2023	NTU	<1	5.0
3	pH at 25 °C	APHA 24 th Edition 4500 – H ⁺ B: 2023	-	7.27	6.50-8.50
4	Electrical Conductivity	APHA 24 th Edition 2510 B: 2023	(µS/cm)	564.8	-
B.	Chemical parameters				
5	Total Dissolved Solids	APHA 24th Edition 2540-C: 2023	mg/L	340	2000
6	Total hardness (as CaCO3)	APHA 24th Edition 2340 C: 2023	mg/L	208	600
7	Calcium (as Ca)	IS 3025 (Part 40): 1991	mg/L	28.2	200
8	Magnesium (as Mg)	IS 3025 (Part 46): 1994	mg/L	33.0	100
9	Calcium Hardness (as CaCO3)	APHA 24th Edition 3500 Ca B: 2023	mg/L	70.5	-
10	Magnesium Hardness (as CaCO3)	APHA 24th Edition 3500 Mg B: 2023	mg/L	137.5	-
11	Total alkalinity (as CaCO3)	APHA 24th Edition 2320 B: 2023	mg/L	294	600
12	Chloride (as Cl)	APHA 24th Edition 4500 Cl- B: 2023	mg/L	91.3	1000



Shrient Analytical and Research Labs Pvt. Ltd

416/15, Dhargas Road, West Tambaram, Chennai- 600045

Phone Number +91 82208 36377 Email: - info@shrientanalytical.com

www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1524

Report Date.	02.06.2025

Sl. No	Parameters	Protocol	Unit	Result	*Limits
					Permissible
13	Free Residual chlorine	APHA 24th Edition 4500 Cl- B: 2023	mg/L	BDL(D.L-0.2)	1.0
14	Sulphate as (SO ₄ 2-)	APHA 24th Edition 4500 SO ₄ 2- E: 2023	mg/L	20.3	400
15	Iron (as Fe)	APHA 24th Edition 3500 Fe B: 2023	mg/L	0.04	0.3
16	Nitrate (as NO ₃)	IS 3025 (Part 34): 1988	mg/L	1.47	45
17	Fluoride (as F)	APHA 24th Edition 4500 F- D: 2023	mg/L	0.23	1.5
18	Manganese (as Mn)	APHA 24th Edition 3500 Mn B: 2023	mg/L	BDL(D.L-0.05)	0.3

Remarks: *Drinking Water Specifications as per IS – 10500:2012. BDL – Below Detectable limit (DL - Detectable limit).

For Shrient Analytical and Research Labs Pvt. Ltd


Verified



END OF THE REPORT


Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.

LAB SERVICES FOR:- Food, Water, Milk, Environment, Academic & Industrial Segment.

CIN : U74999TN2017PTC116807 / GST No : 33AAYCS7325R1ZA / PAN No: AAYCS7325R

Page 2 of 2



Shrient Analytical and Research Labs Pvt. Ltd

416/15, Dhargas Road, West Tambaram, Chennai- 600045

Phone Number +91 82208 36377 Email: - info@shrientanalytical.com

www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1525

Report Date.	02.06.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	WATER
Sample Mark	GW4-Tenkarai

Customer Reference	By Mail	Sampling Procedure	IS 17614: Part 14: 2021
Sample Reference No	SARL/W/CHE-1470	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	25.05.2025	Test Completed on	02.06.2025
Sample Condition	Fit for Analysis		

Sl. No.	Parameters	Protocol	Unit	Result	*Limits
					Permissible
A.	Physical parameters				
1	Odour	IS 3025 (Part 5): 2018	-	Agreeable	Agreeable
2	Turbidity	APHA 24 th Edition 2130 B: 2023	NTU	<1	5.0
3	pH at 25 °C	APHA 24 th Edition 4500 – H ⁺ B: 2023	-	7.54	6.50-8.50
4	Electrical Conductivity	APHA 24 th Edition 2510 B: 2023	(µS/cm)	812.2	-
B.	Chemical parameters				
5	Total Dissolved Solids	APHA 24th Edition 2540-C: 2023	mg/L	490	2000
6	Total hardness (as CaCO3)	APHA 24th Edition 2340 C: 2023	mg/L	286	600
7	Calcium (as Ca)	IS 3025 (Part 40): 1991	mg/L	67.2	200
8	Magnesium (as Mg)	IS 3025 (Part 46): 1994	mg/L	28.3	100
9	Calcium Hardness (as CaCO3)	APHA 24th Edition 3500 Ca B: 2023	mg/L	168	-
10	Magnesium Hardness (as CaCO3)	APHA 24th Edition 3500 Mg B: 2023	mg/L	118	-
11	Total alkalinity (as CaCO3)	APHA 24th Edition 2320 B: 2023	mg/L	304	600
12	Chloride (as Cl)	APHA 24th Edition 4500 Cl- B: 2023	mg/L	115	1000

LAB SERVICES FOR:- Food, Water, Milk, Environment, Academic & Industrial Segment.

CIN : U74999TN2017PTC116807 / GST No : 33AAYCS7325R1ZA / PAN No: AAYCS7325R

Page 1 of 2



Shrient Analytical and Research Labs Pvt. Ltd

416/15, Dhargas Road, West Tambaram, Chennai- 600045

Phone Number +91 82208 36377 Email: - info@shrientanalytical.com

www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1525

Report Date.	02.06.2025

Sl. No	Parameters	Protocol	Unit	Result	*Limits
					Permissible
13	Free Residual chlorine	APHA 24th Edition 4500 Cl- B: 2023	mg/L	BDL (D.L-0.2)	1.0
14	Sulphate as (SO ₄ 2-)	APHA 24th Edition 4500 SO ₄ 2- E: 2023	mg/L	21.5	400
15	Iron (as Fe)	APHA 24th Edition 3500 Fe B: 2023	mg/L	0.06	0.3
16	Nitrate (as NO ₃)	IS 3025 (Part 34): 1988	mg/L	1.65	45
17	Fluoride (as F)	APHA 24th Edition 4500 F- D: 2023	mg/L	0.38	1.5
18	Manganese (as Mn)	APHA 24th Edition 3500 Mn B: 2023	mg/L	BDL(D.L-0.05)	0.3

Remarks: *Drinking Water Specifications as per IS – 10500:2012. BDL – Below Detectable limit (DL - Detectable limit).

For Shrient Analytical and Research Labs Pvt. Ltd


Verified



END OF THE REPORT


Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.

LAB SERVICES FOR:- Food, Water, Milk, Environment, Academic & Industrial Segment.

CIN : U74999TN2017PTC116807 / GST No : 33AAYCS7325R1ZA / PAN No: AAYCS7325R

Page 2 of 2



Shrient Analytical and Research Labs Pvt. Ltd

416/15, Dhargas Road, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: - info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1526

Report Date.	02.06.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	WATER
Sample Mark	GW5-Varagunaramapuram

Customer Reference	By Mail	Sampling Procedure	IS 17614: Part 14: 2021
Sample Reference No	SARL/W/CHE-1526	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	25.05.2025	Test Completed on	02.06.2025
Sample Condition	Fit for Analysis		

Sl. No.	Parameters	Protocol	Unit	Result	*Limits
					Permissible
A.	Physical parameters				
1	Odour	IS 3025 (Part 5): 2018	-	Agreeable	Agreeable
2	Turbidity	APHA 24 th Edition 2130 B: 2023	NTU	<1	5.0
3	pH at 25 °C	APHA 24 th Edition 4500 – H ⁺ B: 2023	-	7.69	6.50-8.50
4	Electrical Conductivity	APHA 24 th Edition 2510 B: 2023	(µS/cm)	497.6	-
B.	Chemical parameters				
5	Total Dissolved Solids	APHA 24th Edition 2540-C: 2023	mg/L	298	2000
6	Total hardness (as CaCO3)	APHA 24th Edition 2340 C: 2023	mg/L	194	600
7	Calcium (as Ca)	IS 3025 (Part 40): 1991	mg/L	40.8	200
8	Magnesium (as Mg)	IS 3025 (Part 46): 1994	mg/L	22.1	100
9	Calcium Hardness (as CaCO3)	APHA 24th Edition 3500 Ca B: 2023	mg/L	102	-
10	Magnesium Hardness (as CaCO3)	APHA 24th Edition 3500 Mg B: 2023	mg/L	92	-
11	Total alkalinity (as CaCO3)	APHA 24th Edition 2320 B: 2023	mg/L	286	600
12	Chloride (as Cl)	APHA 24th Edition 4500 Cl- B: 2023	mg/L	40.5	1000



Shrient Analytical and Research Labs Pvt. Ltd

416/15, Dhargas Road, West Tambaram, Chennai- 600045

Phone Number +91 82208 36377 Email: - info@shrientanalytical.com

www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1526

Report Date.	02.06.2025

Sl. No	Parameters	Protocol	Unit	Result	*Limits
					Permissible
13	Free Residual chlorine	APHA 24th Edition 4500 Cl- B: 2023	mg/L	BDL(D.L-0.2)	1.0
14	Sulphate as (SO42-)	APHA 24th Edition 4500 SO42- E: 2023	mg/L	16.8	400
15	Iron (as Fe)	APHA 24th Edition 3500 Fe B: 2023	mg/L	BDL(D.L - 0.01)	0.3
16	Nitrate (as NO3)	IS 3025 (Part 34): 1988	mg/L	BDL(D.L – 1.0)	45
17	Fluoride (as F)	APHA 24th Edition 4500 F- D: 2023	mg/L	BDL(D.L – 0.1)	1.5
18	Manganese (as Mn)	APHA 24th Edition 3500 Mn B: 2023	mg/L	BDL(D.L-0.05)	0.3

Remarks: *Drinking Water Specifications as per IS – 10500:2012. BDL – Below Detectable limit (DL - Detectable limit).

For Shrient Analytical and Research Labs Pvt. Ltd


Verified



END OF THE REPORT


Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.

LAB SERVICES FOR:- Food, Water, Milk, Environment, Academic & Industrial Segment.

CIN : U74999TN2017PTC116807 / GST No : 33AAYCS7325R1ZA / PAN No: AAYCS7325R

Page 2 of 2



Shrient Analytical and Research Labs Pvt. Ltd

416/15, Dhargas Road, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: - info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1527

Report Date.	02.06.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	WATER
Sample Mark	GW6-A. Lakshmipuram

Customer Reference	By Mail	Sampling Procedure	IS 17614: Part 14: 2021
Sample Reference No	SARL/W/CHE-1472	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	25.05.2025	Test Completed on	02.06.2025
Sample Condition	Fit for Analysis		

Sl. No.	Parameters	Protocol	Unit	Result	*Limits
					Permissible
A.	Physical parameters				
1	Odour	IS 3025 (Part 5): 2018	-	Agreeable	Agreeable
2	Turbidity	APHA 24 th Edition 2130 B: 2023	NTU	<1	5.0
3	pH at 25 °C	APHA 24 th Edition 4500 – H ⁺ B: 2023	-	7.35	6.50-8.50
4	Electrical Conductivity	APHA 24 th Edition 2510 B: 2023	(µS/cm)	920.6	-
B.	Chemical parameters				
5	Total Dissolved Solids	APHA 24th Edition 2540-C: 2023	mg/L	552	2000
6	Total hardness (as CaCO3)	APHA 24th Edition 2340 C: 2023	mg/L	378	600
7	Calcium (as Ca)	IS 3025 (Part 40): 1991	mg/L	104	200
8	Magnesium (as Mg)	IS 3025 (Part 46): 1994	mg/L	28.3	100
9	Calcium Hardness (as CaCO3)	APHA 24th Edition 3500 Ca B: 2023	mg/L	260	-
10	Magnesium Hardness (as CaCO3)	APHA 24th Edition 3500 Mg B: 2023	mg/L	118	-
11	Total alkalinity (as CaCO3)	APHA 24th Edition 2320 B: 2023	mg/L	280	600
12	Chloride (as Cl)	APHA 24th Edition 4500 Cl- B: 2023	mg/L	165	1000



Shrient Analytical and Research Labs Pvt. Ltd

416/15, Dhargas Road, West Tambaram, Chennai- 600045

Phone Number +91 82208 36377 Email: - info@shrientanalytical.com

www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1527

Report Date.	02.06.2025

Sl. No	Parameters	Protocol	Unit	Result	*Limits
					Permissible
13	Free Residual chlorine	APHA 24th Edition 4500 Cl- B: 2023	mg/L	BDL(D.L-0.2)	1.0
14	Sulphate as (SO42-)	APHA 24th Edition 4500 SO42- E: 2023	mg/L	36.9	400
15	Iron (as Fe)	APHA 24th Edition 3500 Fe B: 2023	mg/L	0.09	0.3
16	Nitrate (as NO3)	IS 3025 (Part 34): 1988	mg/L	1.44	45
17	Fluoride (as F)	APHA 24th Edition 4500 F- D: 2023	mg/L	0.41	1.5
18	Manganese (as Mn)	APHA 24th Edition 3500 Mn B: 2023	mg/L	BDL(D.L-0.05)	0.3

Remarks: *Drinking Water Specifications as per IS – 10500:2012. BDL – Below Detectable limit (DL - Detectable limit).

For Shrient Analytical and Research Labs Pvt. Ltd


Verified



END OF THE REPORT


Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.

LAB SERVICES FOR:- Food, Water, Milk, Environment, Academic & Industrial Segment.

CIN : U74999TN2017PTC116807 / GST No : 33AAYCS7325R1ZA / PAN No: AAYCS7325R

Page 2 of 2



Shrient Analytical and Research Labs Pvt. Ltd

416/15, Dhargas Road, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: - info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1530	Report Date.	02.06.2025

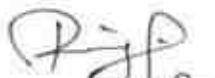
Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	SOIL
Sample Mark	Project Location

Customer Reference	By Mail	Sampling Procedure	-
Sample Reference No	SARL/SO/CHE-1530	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	25.05.2025	Test Completed on	02.06.2025
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results
1	pH at 25 °C	IS 2720: Part 26: 1987	-	7.31
2	Electrical Conductivity	IS 14767: 2000	µmhos/cm	33.96
3	Dry matter content	IS 15106: 2002	%	97.57
4	Water Content	IS 15106: 2002	%	2.43
5	Organic Matter	IS 2720: Part 22: 1972	%	0.62
6	Nitrogen and Nitrogenous compounds	IS 14684: 1999	mg/kg	100
7	Soil Texture	Methods Manual - Soil testing in India - P. No-67: 2011	%	Clay loam
8	<u>Grain Size Distribution</u>	Methods Manual - Soil testing in India - P. No-67: 2011	%	29.87
	i. Sand	Methods Manual - Soil testing in India - P. No-67: 2011	%	
	ii. Silt	Methods Manual - Soil testing in India - P. No-67: 2011	%	34.38
	iii. Clay	Methods Manual - Soil testing in India - P. No-67: 2011	%	35.75
9	Phosphorus as P	IS 10158: 1982	mg/kg	1.83
10	Sodium as Na	USEPA 3050 B: 1996	mg/kg	456
11	Potassium as K	USEPA 3050 B: 1996	mg/kg	782
12	Total soluble sulphates	IS 2720: Part 27: 1977	%	BDL (D.L.0.02)
13	Porosity	SARL/SOP/SO/001 (Issue No:01, Issue Date – 01.03.2023): 2023	%	18.6
14	Water holding capacity	Methods Manual - Soil testing in India - P. No-76: 2011	Inches/foot	38

BDL – Below Detectable limit (DL - Detectable limit).

For Shrient Analytical and Research Labs Pvt. Ltd


Verified




Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, Dhargas Road, West Tambaram, Chennai- 600045

Phone Number +91 82208 36377 Email: - info@shrientanalytical.com

www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1531	Report Date.	02.06.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	SOIL
Sample Mark	S2 - Sivalingapuram

Customer Reference	By Mail	Sampling Procedure	-
Sample Reference No	SARL/SO/CHE-1531	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	25.05.2025	Test Completed on	02.06.2025
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results
1	pH at 25 °C	IS 2720: Part 26: 1987	-	7.57
2	Electrical Conductivity	IS 14767: 2000	µmhos/cm	23.71
3	Dry matter content	IS 15106: 2002	%	97.86
4	Water Content	IS 15106: 2002	%	2.14
5	Organic Matter	IS 2720: Part 22: 1972	%	1.21
6	Nitrogen and Nitrogenous compounds	IS 14684: 1999	mg/kg	157
7	Soil Texture	Methods Manual - Soil testing in India - P. No-67: 2011	%	CLAY LOAM
8	<u>Grain Size Distribution</u>	Methods Manual - Soil testing in India - P. No-67: 2011	%	31.42
	i. Sand	Methods Manual - Soil testing in India - P. No-67: 2011	%	39.86
	ii. Silt	Methods Manual - Soil testing in India - P. No-67: 2011	%	28.72
	iii. Clay	Methods Manual - Soil testing in India - P. No-67: 2011	%	BDL (D.L.0.02)
9	Phosphorus as P	IS 10158: 1982	mg/kg	2.28
10	Sodium as Na	USEPA 3050 B: 1996	mg/kg	479
11	Potassium as K	USEPA 3050 B: 1996	mg/kg	820
12	Total soluble sulphates	IS 2720: Part 27: 1977	%	BDL (D.L.0.02)
13	Porosity	SARL/SOP/SO/001 (Issue No:01, Issue Date – 01.03.2023): 2023	%	18.6
14	Water holding capacity	Methods Manual - Soil testing in India - P. No-76: 2011	Inches/foot	36

BDL – Below Detectable limit (DL - Detectable limit).

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



Authorized Signatory

S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.

LAB SERVICES FOR:- Food, Water, Milk, Environment, Academic & Industrial Segment.

CIN : U74999TN2017PTC116807 / GST No : 33AAYCS7325R1ZA / PAN No: AAYCS7325R

Page 1 of 1



Shrient Analytical and Research Labs Pvt. Ltd

416/15, Dhargas Road, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: - info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1532	Report Date.	02.06.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	SOIL
Sample Mark	S3-Ananthappannaickerpatti

Customer Reference	By Mail	Sampling Procedure	-
Sample Reference No	SARL/SO/CHE-1532	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	25.05.2025	Test Completed on	02.06.2025
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results
1	pH at 25 °C	IS 2720: Part 26: 1987	-	7.73
2	Electrical Conductivity	IS 14767: 2000	µmhos/cm	77.35
3	Dry matter content	IS 15106: 2002	%	93.85
4	Water Content	IS 15106: 2002	%	6.15
5	Organic Matter	IS 2720: Part 22: 1972	%	0.81
6	Nitrogen and Nitrogenous compounds	IS 14684: 1999	mg/kg	98.8
7	Soil Texture	Methods Manual - Soil testing in India - P. No-67: 2011	%	Silt loam
8	Grain Size Distribution	Methods Manual - Soil testing in India - P. No-67: 2011	%	21.56
	i. Sand	Methods Manual - Soil testing in India - P. No-67: 2011	%	52.64
	ii. Silt	Methods Manual - Soil testing in India - P. No-67: 2011	%	25.8
	iii. Clay	Methods Manual - Soil testing in India - P. No-67: 2011	%	BDL (D.L.0.02)
9	Phosphorus as P	IS 10158: 1982	mg/kg	1.59
10	Sodium as Na	USEPA 3050 B: 1996	mg/kg	342
11	Potassium as K	USEPA 3050 B: 1996	mg/kg	764
12	Total soluble sulphates	IS 2720: Part 27: 1977	%	BDL (D.L.0.02)
13	Porosity	SARL/SOP/SO/001 (Issue No:01, Issue Date – 01.03.2023): 2023	%	18.5
14	Water holding capacity	Methods Manual - Soil testing in India - P. No-76: 2011	Inches/foot	40

BDL – Below Detectable limit (DL - Detectable limit).

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, Dhargas Road, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: - info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1533	Report Date.	02.06.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	SOIL
Sample Mark	S4-Tenkarai

Customer Reference	By Mail	Sampling Procedure	-
Sample Reference No	SARL/SO/CHE-1533	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	25.05.2025	Test Completed on	02.06.2025
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results
1	pH at 25 °C	IS 2720: Part 26: 1987	-	7.35
2	Electrical Conductivity	IS 14767: 2000	µmhos/cm	181.6
3	Dry matter content	IS 15106: 2002	%	90.2
4	Water Content	IS 15106: 2002	%	9.8
5	Organic Matter	IS 2720: Part 22: 1972	%	2.55
6	Nitrogen and Nitrogenous compounds	IS 14684: 1999	mg/kg	751
7	Soil Texture	Methods Manual - Soil testing in India - P. No-67: 2011	%	SILT LOAM
8	<u>Grain Size Distribution</u>	Methods Manual - Soil testing in India - P. No-67: 2011	%	39.45
	i. Sand			
	ii. Silt	Methods Manual - Soil testing in India - P. No-67: 2011	%	55.31
	iii. Clay	Methods Manual - Soil testing in India - P. No-67: 2011	%	5.24
9	Phosphorus as P	IS 10158: 1982	mg/kg	1.34
10	Sodium as Na	USEPA 3050 B: 1996	mg/kg	199
11	Potassium as K	USEPA 3050 B: 1996	mg/kg	766
12	Total soluble sulphates	IS 2720: Part 27: 1977	%	BDL (D.L.0.02)
13	Porosity	SARL/SOP/SO/001 (Issue No:01, Issue Date – 01.03.2023): 2023	%	18.4
14	Water holding capacity	Methods Manual - Soil testing in India - P. No-76: 2011	Inches/foot	42

BDL – Below Detectable limit (DL - Detectable limit).

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.



Shrient Analytical and Research Labs Pvt. Ltd

416/15, Dhargas Road, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: - info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1534	Report Date.	02.06.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	SOIL
Sample Mark	S5-Varagunaramapuram

Customer Reference	By Mail	Sampling Procedure	-
Sample Reference No	SARL/SO/CHE-1534	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	25.05.2025	Test Completed on	02.06.2025
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results
1	pH at 25 °C	IS 2720: Part 26: 1987	-	7.15
2	Electrical Conductivity	IS 14767: 2000	µmhos/cm	154.8
3	Dry matter content	IS 15106: 2002	%	95.8
4	Water Content	IS 15106: 2002	%	4.2
5	Organic Matter	IS 2720: Part 22: 1972	%	2.14
6	Nitrogen and Nitrogenous compounds	IS 14684: 1999	mg/kg	590
7	Soil Texture	Methods Manual - Soil testing in India - P. No-67: 2011	%	SILT LOAM
8	<u>Grain Size Distribution</u>	Methods Manual - Soil testing in India - P. No-67: 2011	%	35.97
	i. Sand	Methods Manual - Soil testing in India - P. No-67: 2011	%	54.11
	ii. Silt	Methods Manual - Soil testing in India - P. No-67: 2011	%	9.92
	iii. Clay	Methods Manual - Soil testing in India - P. No-67: 2011	%	BDL (D.L.0.02)
9	Phosphorus as P	IS 10158: 1982	mg/kg	1.59
10	Sodium as Na	USEPA 3050 B: 1996	mg/kg	218
11	Potassium as K	USEPA 3050 B: 1996	mg/kg	655
12	Total soluble sulphates	IS 2720: Part 27: 1977	%	BDL (D.L.0.02)
13	Porosity	SARL/SOP/SO/001 (Issue No:01, Issue Date – 01.03.2023): 2023	%	19.2
14	Water holding capacity	Methods Manual - Soil testing in India - P. No-76: 2011	Inches/foot	39

BDL – Below Detectable limit (DL - Detectable limit).

For Shrient Analytical and Research Labs Pvt. Ltd

Verified



END OF THE REPORT

Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.

LAB SERVICES FOR:- Food, Water, Milk, Environment, Academic & Industrial Segment.

CIN : U74999TN2017PTC116807 / GST No : 33AAYCS7325R1ZA / PAN No: AAYCS7325R

Page 1 of 1



Shrient Analytical and Research Labs Pvt. Ltd

416/15, Dhargas Road, West Tambaram, Chennai- 600045

Phone Number +91 82208 36377 Email: - info@shrientanalytical.com

www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1535	Report Date.	02.06.2025

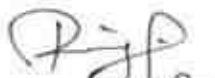
Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	SOIL
Sample Mark	S6-A. Lakshmipuram

Customer Reference	By Mail	Sampling Procedure	-
Sample Reference No	SARL/SO/CHE-1535	Sample Received on	26.05.2025
Sample Collected by	LABORATORY	Test Commenced on	26.05.2025
Sample Collected on	25.05.2025	Test Completed on	02.06.2025
Sample Condition	Fit for Analysis		

S. No.	Parameters	Protocol	Unit	Results
1	pH at 25 °C	IS 2720: Part 26: 1987	-	6.89
2	Electrical Conductivity	IS 14767: 2000	µmhos/cm	98.47
3	Dry matter content	IS 15106: 2002	%	96.54
4	Water Content	IS 15106: 2002	%	3.46
5	Organic Matter	IS 2720: Part 22: 1972	%	1.56
6	Nitrogen and Nitrogenous compounds	IS 14684: 1999	mg/kg	636
7	Soil Texture	Methods Manual - Soil testing in India - P. No-67: 2011	%	SILT LOAM
8	<u>Grain Size Distribution</u>	Methods Manual - Soil testing in India - P. No-67: 2011	%	36.58
	i. Sand	Methods Manual - Soil testing in India - P. No-67: 2011	%	52.47
	ii. Silt	Methods Manual - Soil testing in India - P. No-67: 2011	%	10.95
	iii. Clay	Methods Manual - Soil testing in India - P. No-67: 2011	%	BDL (D.L.0.02)
9	Phosphorus as P	IS 10158: 1982	mg/kg	1.34
10	Sodium as Na	USEPA 3050 B: 1996	mg/kg	235
11	Potassium as K	USEPA 3050 B: 1996	mg/kg	592
12	Total soluble sulphates	IS 2720: Part 27: 1977	%	BDL (D.L.0.02)
13	Porosity	SARL/SOP/SO/001 (Issue No:01, Issue Date – 01.03.2023): 2023	%	17.6
14	Water holding capacity	Methods Manual - Soil testing in India - P. No-76: 2011	Inches/foot	40

BDL – Below Detectable limit (DL - Detectable limit).

For Shrient Analytical and Research Labs Pvt. Ltd


Verified




Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.

LAB SERVICES FOR:- Food, Water, Milk, Environment, Academic & Industrial Segment.

CIN : U74999TN2017PTC116807 / **GST No :** 33AAYCS7325R1ZA / **PAN No:** AAYCS7325R

Page 1 of 1



Shrient Analytical and Research Labs Pvt. Ltd

416/15, Dhargas Road, West Tambaram, Chennai- 600045
Phone Number +91 82208 36377 Email: - info@shrientanalytical.com
www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1536	Report Date.	02.06.2025

Customer Name & Address	Rough Stone And Gravel of Thiru.B.Kabildev, in S.F.Nos. 623/1C, 623/1D, 623/1G, 623/2A, 623/2B, 623/2C, 623/1A, 623/1B, 623/1E and 623/1F of Gopalapuram Village, Vembakottai Taluk, Virudhunagar District, Tamil Nadu State.
Sample Description	NOISE LEVEL DATA

Customer Reference	As per work order	Sampling Method	SARL/IOP/023
Sample Reference No	SARL/NO/CHE-1536	Date of Monitoring	24.03.2025/ 25.03.2025
Sample Collected by	LABORATORY		

Time in hrs	N1	N2	N3	N4	N5	N6
06.00	43.7	41.1	42.4	40.6	46.0	45.5
07.00	51.5	51.9	50.3	46.9	49.7	50.3
08.00	52.6	46.3	48.6	43.9	47.8	48.5
09.00	51.1	45.1	48.6	46.3	52.4	47.8
10.00	51.6	44.8	47.6	45.1	48.9	47.0
11.00	50.2	43.3	46.4	42.3	47.6	47.5
12.00	46.3	40.4	44.6	44.0	46.5	44.1
13.00	45.7	42.7	46.9	43.6	51.8	44.4
14.00	48.6	44.3	52.5	45.2	46.7	44.1
15.00	51.8	42.4	46.3	49.7	53.0	46.6
16.00	52.7	43.6	48.3	42.0	50.3	48.5
17.00	52.5	45.7	47.6	40.1	49.4	47.8
18.00	47.9	43.8	49.2	45.8	50.1	49.0
19.00	42.6	40.6	50.7	48.3	49.6	50.9
20.00	40.2	41.4	45.3	46.2	44.7	45.5
21.00	36.5	36.4	45.7	44.3	42.0	45.8
22.00	38.2	37.6	49.7	43.1	36.0	47.3
23.00	39.8	38.3	42.5	40.5	35.7	39.1
24.00	37.7	37.6	41.6	39.8	35.9	40.4
01.00	38.1	37.5	37.1	38.6	36.5	39.6
02.00	37.3	40.2	39.5	37.5	38.0	38.7
03.00	39.6	38.1	36.4	37.0	37.3	36.6
04.00	38.9	36.7	35.7	37.8	39.0	38.0
05.00	40.2	41.1	39.8	40.1	41.5	39.6



Shrient Analytical and Research Labs Pvt. Ltd

416/15, Dhargas Road, West Tambaram, Chennai- 600045

Phone Number +91 82208 36377 Email: - info@shrientanalytical.com

www.shrientanalytical.com

TEST REPORT

Report No.	SARL/25/1536S

Report Date.	02.06.2025

	N1	N2	N3	N4	N5	N6
DAY EQUIVALENT	49.7	44.8	48.2	45.4	49.4	47.6
NIGHT EQUIVALENT	38.8	38.6	42.9	39.7	37.9	41.4
DAY & NIGHT EQUIVALENT	48.1	43.5	47.1	44.2	47.7	46.3

Remarks:

LOCATIONS:

N1-Project Location

N2-Sivalingapuram

N3-Ananthappanaickerpatti

N4-Tenkarai

N5-Varagunaramapuram

N6-A. Lakshmipuram

For Shrient Analytical and Research Labs Pvt. Ltd


Verified



END OF THE REPORT


Authorized Signatory
S. BALAMURUGAN
Asst. Technical Manager

Please Contact:

For any Technical Issues & Complaints: technical@shrientanalytical.com

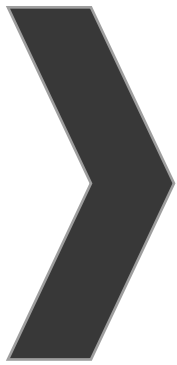
Terms and conditions:

(1) The test items will not be retained for more than 15 days from the date of issue of test report. (2) The results relate only to the items tested (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production. For further details, please see testing and certification regulation, chapter A-3.4. (5) The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.

LAB SERVICES FOR:- Food, Water, Milk, Environment, Academic & Industrial Segment.

CIN : U74999TN2017PTC116807 / GST No : 33AAYCS7325R1ZA / PAN No: AAYCS7325R

Page 2 of 2



ANNEXURE-8



National Accreditation Board for
Testing and Calibration Laboratories

CERTIFICATE OF ACCREDITATION

**SHRIENT ANALYTICAL & RESEARCH LABS PRIVATE
LIMITED**

has been assessed and accredited in accordance with the standard

ISO/IEC 17025:2017

**"General Requirements for the Competence of Testing &
Calibration Laboratories"**

for its facilities at

416/15, DHARGAS ROAD, PERUNGALATHUR, WEST TAMBARAM, CHENNAI, KANCHIPURAM, TAMIL
NADU, INDIA

in the field of

TESTING

Certificate Number: TC-12339

Issue Date: 30/09/2023

Valid Until: 29/09/2025

This certificate remains valid for the Scope of Accreditation as specified in the annexure subject to continued
satisfactory compliance to the above standard & the relevant requirements of NABL.

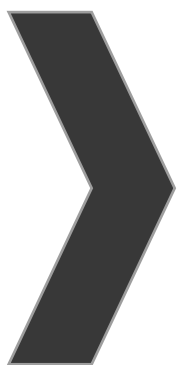
(To see the scope of accreditation of this laboratory, you may also visit NABL website www.nabl-india.org)

Name of Legal Entity: SHRIENT ANALYTICAL AND RESEARCH LABS PRIVATE LIMITED

Signed for and on behalf of NABL



N. Venkateswaran
Chief Executive Officer



ANNEXURE-9

அனுப்புநர்

தலைமையாசிரியர்

அரசு உயர்நிலைப்பள்ளி

மவுண்ட்சீயோன்

விருதுநகர் மாவட்டம்

பெறுநர்

பா.கபில்தேவ் பாஸ்கரன்

125/2 ஆசிரியர் காலணி

K.R.நகர் போஸ்ட்

புதுப்பாளையம்

இராஜபாளையம் வட்டம்

விருதுநகர் மாவட்டம் -626108

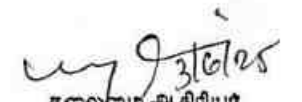
பொருள்: பள்ளி மாணவ மாணவிகளுக்கான இருக்கைகள் மற்றும்
மிதிவண்டி நிறுத்தத்திற்கான மேற்கூரை அமைத்திடக்கோருதல்
தொடர்பாக

வணக்கம்

எங்களது பள்ளியில் சுமார் 15 ஆசிரியர்கள் மற்றும் 200க்கும் மேற்பட்ட
மாணவ மாணவிகள் படித்து வருகின்றனர்.இந்நிலையில் மாணவர்கள் இலகுவாக
அமர்ந்து கற்றிட ஏதுவான இருக்கைகள் போதுமான அளவில் இல்லாததால்
மாணவர்களில் சிலர் கீழே அமர்ந்து கற்க வேண்டிய சூழல் நிலவி வருகிறது.

மேலும் எமது பள்ளியில் பயிலும் மாணவ மாணவிகள் அனைவரும்
சுற்றுலாபாரத்திலுள்ள கிராம புறங்களிலிருந்து மிதிவண்டியின் மூலம் பள்ளிக்கு
வருகை புரிந்து வருகின்றனர். இந்நிலையில் மாணவர்கள் தங்கள் மிதிவண்டிகளை
வெட்ட வெளியில் நிறுத்தி வருகின்றனர். இதனால் அவர்களின் மிதிவண்டிகள் பல
நேரங்களில் பழுதடைந்து விடுவதனால் மாலைநேரங்களில் வீடு திரும்புவதில்
சிரமத்துடன் கூடிய காலதாமதமடையும் நிலை ஏற்படுகிறது. ஆகையினால் மாணவ
மாணவிகளின் நலன்கருதி மிதிவண்டிக்கான மேற்கூரையினை அமைத்து
உதவிடுமாறு மிகவும் பணிவுடன் வேண்டலாகிறது.




தலைமை ஆசிரியர்
அரசு உயர்நிலைப்பள்ளி
மவுண்ட்சீயோன் - 626 139.