

SUMMARY

OF

CUMULATIVE EIA / EMP REPORT

FOR

ROUGHSTONE, JELLY AND GRAVEL QUARRY

**VILLAGE - THARUVAI, TALUK- PALAYAMKOTTAI,
DISTRICT - TIRUNELVELI, STATE - TAMILNADU**

PROPONENT	1. S.KASIRAJAN	2. TVL.SRI DURGAMBIKA BLUE METALS
Extent	4.97.0 Ha	1.95.5 Ha
Survey No.	530/3A, 531/1A, 532, 533/1, 568/5A(P) and 569/3A	570(P) & 571(P)
Tor Obtained Vide Letter No.	SEIAA- TN/F.No.7174/SEAC/ToR -841/2020 dated 17.02.2021	SEIAA- TN/F.No.8153/SEAC/ToR- 929/2020 dated 16.04.2021
Project cost	Rs. 1,09,98,000/-	Rs. 77,27,000/-
EMP Cost	Rs. 4.0 lakhs	Rs. 3.50 lakhs

CATEGORY- B1

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ROUGHSTONE, JELLY AND GRAVEL QUARRY OF THIRU.S.KASIRAJAN & TVL.SRI DURGAMBIKA BLUE METALS IN THARUVAI VILLAGE, PALAYAMKOTTAI TALUK, TIRUNELVELI DISTRICT, TAMIL NADU.

SUMMARY

1.0 GENERAL:

Thiru.S.Kasirajan & Tvl.Sri Durgambika Blue Metals separately proposes to operate **Rough Stone, Jelly and Gravel Quarry** in Tharuvai Village, Palayamkottai Taluk, Tirunelveli District, Tamil Nadu.

Although the individual lease area of each project is less than 5 Ha, the other existing quarries and proposed quarries within the 500m radius along with this subject project works out to > 5 Ha and as such this proposal is considered under Cluster Category – B1 and as per MoEF & CC notification necessitates preparation of EIA / EMP report and public hearing. As such Common EIA for the projects falling in the cluster with cumulative assessment of impacts and EMP for individuals mines is carried out.

The details of the existing quarries located within the 500m radius of the project has been provided below

.No	Name and address of the lessee	Quarry location	Extent	Lease Period
a. Existing Quarries				
1	P.Marimuthu, S/o.Petchi Thevar, 1/3A, Kasba Melbagam, Ponnagudi, Palayamkottai, Tirunelveli.	S.F.No.522/1, 2, 534 & 535 (P), Tharuvai village	4.73.5ha	Proceedings Rc.No.M1/36802/2016 dated 22.03.2018 for a period 5 years from 19.04.2018 to 18.04.2023
2	S.Sankar, S/o.R.Subramaniam, 131/1, APT Road, Erode.	S.F.No.524 (P), Tharuvai village	1.60.0ha	Proceedings Rc.No.M1/43375/2015 dated 31.03.2018 for a period 5 years from 17.04.2018 to 16.04.2023
3	Tvl.Sri Durgambika Blue Metals, 1A/115, Kandithankulam, Tirunelveli.	S.F.No.570 (P), Tharuvai village	1.38.5ha	Proceedings Rc.No.M3/6065/2019 dated 02.03.2018 for a period 5 years from 24.07.2018 to 16.04.2023
Total Extent of Existing Quarries			7.72.0ha	

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.No	Name and address of the lessee	Quarry location	Extent	Lease Period
b. Abandoned Quarries				
1	S.Subbaiah, S/o.Sorna Thevar	S.F.No.568/1 & 569/1B, Tharuvai village	2.63.5ha	Proceedings Rc.No.M1/41558/2011 dated 20.01.2012 for a period 5 years from 07.02.2012 06.02.2017
c. Proposed Quarries				
1	S.Kasirajan, 760, Bazaar Street, Seevalaperi, Palayamkottai Taluk, Tirunelveli	S.F.No.530/3A, 531/1A, 532, 533/1, 568/5A (P) & 569/3A, Tharuvai village	4.97.0ha	Proposed Quarry
2	Tvl.Sri Durgambika Blue Metals, Prop.Thiru.S.Subash Chandra Bose, No.1A/115, Kadithankulam, Tharuvai Village, Palayamkottai Taluk, Tirunelveli	S.F.No.570 (P) & 571 (P), Tharuvai village	1.95.5ha	Proposed Quarry
Total Extent of Proposed Quarries			6.92.5ha	

The total within the 500m radius existing Quarries 7.72 ha lease area

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Salient details of the EIA/EMP report are as follows:

2.0 SITE DESCRIPTION:

The salient features of the project are briefly given below.

S.No	Particulars	1. S.Kasirajan Quarry	2. Tvl.Sri Durgambika Blue Metals
1.	Name of the Project	Rough Stone, Jelly and Gravel Quarry of Thiru S.Kasirajan	Rough Stone, Jelly and Gravel Quarry of Tvl.Sri Durgambika Blue Metals
2.	Mining Lease area (ML area)	4.97.0 Ha	1.95.5 Ha
3.	Survey No.	530/3A, 531/1A, 532, 533/1, 568/5A(P) and 569/3A	570(P) & 571(P)
4.	Location of the project	Tharuvai Village, Palayamkottai Taluk, Tirunelveli District,	
5.	Precise area Letter	Rc.No.M1/36182/2018 dated 21.05.2019.	Rc.No.M3/10059/2020 dated 11.09.2020.
6.	Mine plan	Rc.No.M1/36182/2018, dated 22.07.2019.	Rc.No.M3/10059/2020, dated 30.10.2020.
7.	ToR Letter	SEIAA-TN/F.No.7174/SEAC/ToR-841/2020 dated 17.02.2021	SEIAA-TN/F.No.8153/SEAC/ToR-929/2020 dated 16.04.2021
8.	Type of land	Patta land.	
9.	Latitude: Longitude:	08°38'34"N to 08°38'43"N 77°40'50"E to 77°40'58"E	08°38'26.34"N to 08°38'33.41"N 77°40'54.60"E to 77°41'00.13"E
10.	Topography	Plain	
11.	Temperature °C (Mean Minimum & Mean Maximum)	22.9°C and 33.5°C	
12.	Average Annual rainfall	879mm	
13.	Nearest Highway	(NH-7) Tirunelveli – Kanniyakumari - 2.1km – SE (SH-40)Tirunelveli– Pattamadai – 2.6km – N	(NH-7) Tirunelveli – Kanniyakumari - 2.0km –SE (SH-40) Tirunelveli – Tenkasi – 3.0km – N
14.	Nearest Railway station	Sengulam – 4.0 km (SE)	Sengulam – 3.6km (S)
15.	Nearest Airport	Tuticorin – 40.0 km (NE)	Tuticorin – 39.0 km (NE)
16.	Nearest Major water bodies	Tank - 720m – (SE) Pachaiyar River 2.2km – (W) Palayan Channel 3.1km – (W) Tambraparni River 4.4km – (NW) Tirunelveli Channel 4.7km – (NW) Manimuttar Canal 8.8km – (S)	Tank - 410m – (SE) Pachaiyar River 2.5km – (W) Palayan Channel 3.5km – (W) Tambraparni River 4.7km – (NW) Tirunelveli Channel 5.2km – (NW) Manimuttar Canal 8.5km – (S)

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		Kodagan Channel 6.5km- (NW) Nainarkulam Channel 7.3km – (N)	Kodagan Channel 6.9km- (NW) Nainarkulam Channel 7.3km – (N)
17.	Environmental sensitive areas, Protected areas as per Wildlife Protection Act, 1972	Nil within 10km radius.	
18.	Reserved / Protected Forests	Muttur Malai Woif Hill R F – 8.4km - NE	
19.	Nearest Town	Tirunelveli – 8.8km (N)	Tirunelveli – 9.0km (N)
20.	Seismic Zone	Area falls in Zone – II (Least Active)	

2.1 PROJECT DESCRIPTION:

S.No	Particulars	1. S.Kasirajan Quarry				2. Tvl.Sri Durgambika Blue Metals			
		Type of reserves	Rough stone (Cum)	Weath ered Rock (cum)	Gravel (cum)	Type of reserves	Rough stone (Cum)	Weathe red Rock (cum)	Gravel (cum)
1.	Geological resources								
2.	Mineable reserves	Geological reserves	27,81,184	99,328	49,664	Geological reserves	7,82,080	19,552	19,552
		Mineable reserves (upto 59m)	7,72,636	47,076	24,080	Mineable reserves (upto 42m)	2,89,000	14,620	15,136
		Mineable reserves (upto 54m)	7,57,111	47,076	24,080	Mineable reserves (upto 37m)	2,81,575	14,620	15,136
3.	Lease period	5 years				5 years			
4.	Production Capacity	YEA R	Roughst one (m3)	Weath ered Rock (m3)	Gravel (m3)	YEAR	Roughston e (m3)	Weath ered Rock (m3)	Gravel (m3)
		I	153762	47076	24080	I	57800	11696	12056
		II	154557	--	--	II	57525	2924	3080
		III	155365	--	--	III	58050	--	--
		IV	155113	--	--	IV	57775	--	--
		V	138314	--	--	V	50425	--	--
		Total	757111	47076	24080	Total	281575	14620	15136
5.	Total Waste	There is no waste generation anticipated in this quarry operation since the entire excavated material will be utilized.							
6.	Method of mining	Quarry operations involve jack hammer drilling, blasting, excavation, loading and transportation of Roughstone to needy buyers.							
7.	Bench parameters	Bench height - 7 m, bench width - 7m				Bench height - 5m, bench width - 5m			

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8.	Ultimate mine depth	54m for the period of Five years.	37m for the period of Five years.
9.	Ore end use	The excavated rough stone will be excavated and loaded into tipper to the needy customers.	
10.	Manpower	36 persons	21 persons
11.	Water Requirement	Total - 4.0KLD	Total – 3.0 KLD
12.	Source	Mine pit water and outside agencies.	
13.	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.	
14.	Site services	Statutory requirements like mine office, first aid room, rest shelters, toilets etc. will be provided.	
15.	CER Budget	Rs. 5.0 Lakhs	Rs. 3.0 Lakhs
16.	Project cost	Rs. 1,09,98,000/- (Operational + Fixed asset + EMP cost)	Rs. 77,27,000/- (Operational + Fixed asset + EMP cost)

3.0 EXISTING ENVIRONMENTAL SCENARIO:

3.1 GENERAL:

The studies and data collection have been carried out systematically and meticulously as per relevant IS codes, CPCB and MoEF&CC guidelines and as per approved ToR during **Summer Season, March 2021 to May 2021**) For the purpose of this study, the area has been divided into two zones, namely, core and buffer zones. Core zone is considered as the total lease area, while buffer zone encompasses an area of 10 km radius distance from the periphery of cluster lease area.

3.2 SOCIO-ECONOMIC STATUS:

Based on 2011 census data, in the 10km radius there are 45 Rural villages from Four Taluks namely Tirunelveli, Ambasamudram, Palayamkottai, Nanguneri, and 4 urban areas of two taluks namely, Gopalamudram (TP), Pathamadai (TP), Melacheval (TP) of Ambasamudram Taluk and Tirunelveli (M Corp.) of Tirunelveli Taluk. The distribution of population is as below:

- Male - 306370 (49.47%)
- Female - 312992(50.53%).
- Total - 619362
- Scheduled caste - 14.93%

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- Scheduled tribes - 0.33%
- Total literacy rate in the area - 79.99% of the people are literate and 20.01% of the people are illiterate.

The occupational structure of the area is as below:

Total main workers	-	224560 (36.30%)
Total marginal workers	-	26074 (4.20%)
Total non-workers	-	368728 (59.50%)

3.3 EXISTING ENVIRONMENTAL QUALITY:

1. Ambient Air Quality:

The ambient air quality data for PM₁₀, PM_{2.5}, SO₂, NO₂, CO studied at 8 locations as per prescribed guidelines/ methods. The AAQ monitored data for all locations for above parameters are shown in below.

Season: Summer Season, March 2021 to May 2021

Values in µg/m³

S.No	PARAMETERS	Cat.* (R,I,S)	PM ₁₀	PM _{2.5}	SO ₂	NO ₂
1	CORE ZONE (1 Location)	I	60.2 to 79.2	31.2 to 40.4	5.1 to 7.8	8.2 to 10.6
2	BUFFER ZONE (5Locations)	R	49.9 to 71.3	24.1 to 34.6	4.3 to 7.1	6.4 to 10.1
CPCB LIMITS			PM₁₀	PM_{2.5}	SO₂	NO₂
2009 Notification			100	60	80	80
* Note: BDL- Below Detectable Limit, DL- Detectable Limit.						
Conclusion: The existing Ambient Air Quality levels in the monitored locations for PM₁₀, PM_{2.5}, SO₂, NO₂ & CO are within the prescribed CPCB limits.						

2. Water Environment:

Parameter	No of Samples – 6 samples					Season: Summer Season, March 2021 to May 2021)				
	pH	EC (µmhos/cm)	TDS (mg/L)	Chloride (mg/L)	Total Hardness (mg/L)	Total Alkalinity (mg/L)	Sulphate (mg/L)	Iron (mg/L)	Nitrate (mg/L)	Fluoride (mg/L)
BUFFER ZONE (6 Locations)	7.01 to 7.82	605.8 to 1217	364 to 736	56.7 to 212	160 to 492	160 to 314	20.6 to 173	0.02 to 0.14	BDL to 2.28	0.25 to 0.66
Limits* Permissible	6.5-8.5	-	2000	1000	600	600	400	0.3	45	1.5
Conclusion: The water quality of the collected ground water samples were found to be within the prescribed permissible limits of IS: 10500:2012 Norms for Drinking in the absence of an alternative source*.										

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3. Noise Environment:

No of locations – 6		Season: Summer Season, March 2021 to May 2021)		
Noise Level In dB(A)	Core Zone dB(A) (1 Location)	*Work zone exposure limit dB(A)	Buffer Zone dB(A) (5 Locations)	MOEF&CC Norms dB(A)
Day Equivalent	43.1	90	41.5 to 46.6	55
Night Equivalent	37.9		37.0 to 39.8	45

*Permissible noise for industrial workers as laid down by CPCB (at 8 hrs Exposure Time)
Conclusion: While comparing with the MoEF&CC Norms, the monitored ambient noise levels are within the limit values for Residential areas.

4. Soil Quality:

Parameter	pH	Electrical Conductivity µmhos/cm	Soil Type	Organic matter content %	Total Nitrogen mg/kg	Phosphorus mg/kg	Sodium mg/kg	Potassium mg/kg
Core Zone	7.24	120	Silt Loam	1.32	190	1.83	410	1180
Buffer Zone	6.32 – 7.81	46.72 – 105.6	Silty Clay Loam	0.72– 1.07	65.9 - 120	1.14 - 1.92	320 - 475	670 - 1290

3.4 LAND ENVIRONMENT:

Landuse pattern carried out through remote sensing satellite data show that 34.96% of the study area is agriculture land and 23.04% are fallow land. Land with scrub constitutes 7.48 % followed by land without scrub is 22.16%, water bodies constitutes 8.66% and remaining constitutes 3.70%.

3.5 BIOLOGICAL ENVIRONMENT:

The lease area is a non forest, private land. Partly mined out area in Kasirajan lease area where as Sri Durgambika blue metals is a plain undisturbed land. The lease area has some bushes like Prosopis juliflora, Calotropis gigantea. etc. In the buffer zone the dominant species are Prosopis juliflora, Calotropis gigantean, Borassus flabellifer, Syzygium cumini, Ziziphus jujube, Abutilon indicum Ficus benghalensis, Acacia nilotica, Jatropha glandulifera, Morinda tinctoria, etc. No Wild Life Sanctuary or National Park within the study area of 10 km. Domesticated animals and common birds are observed in the study area.

3.6 HYDROLOGICAL STUDY:

There are no drainage course near the lease area. There are a few tanks located in the study area.

The stage of groundwater development of Palayamkottai Taluk where the study area falls is categorized as 'Safe' from ground water development point of view as per the National Water Mission, Ministry of Jal Shakti, Government of India .

In the study area, the shallow aquifer is developed through dug wells and deeper aquifer through tube wells. The groundwater has revealed that potential fractures are encountered at deeper levels. The occurrence of groundwater mainly in the porous soil are weathered layers, very negligible amount of groundwater percolated through the poorly fractured layer. Besides, the mining area consists of hard compact rock, no major water seepage within the mine is expected. From the nearby working quarries it is observed that there are no seepages in the mine faces because of the hard rock formation. Similar situation is expected in these leases also.

4.0 ANTICIPATED ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES:

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.

4.1 AIR ENVIRONMENT:

The proposed mining and allied operations may cause deterioration of air quality due to pollution arising from the project operation if prompt care is not taken. The principal sources of air pollution in general due to mining and allied activities will be:

Dust generation in the mine due to:

- ❖ Excavation of material
- ❖ Movement of HEMM such as Excavators, tippers etc.
- ❖ Loading and unloading operation
- ❖ Transportation

And Gaseous emission due to machinery exhaust.

The following measures will be adopted to control impact on the air quality due to mining operations in the lease area:

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- Deployment of mobile water sprinkler for fugitive dust suppression in haul roads.
- Covering of drill holes with wet sag or use of water jet for dousing the cuttings.
- Proper maintenance of Haul roads and other roads.
- Water sprinkling in main mineral transport road
- Proper maintenance of HEMM to minimize gaseous emission
- Transportation of material by tarpaulin covered trucks
- Imparting sufficient training to operators on safety and environmental parameters
- Development of green belt/ plantation in various areas within the mine lease area etc.

Combined cumulative computer Air Quality Model simulations carried out show that the after commencement of both the projects resultant added concentrations with baseline figures with respect to PM₁₀ is in the range of 63.6 µg/m³ to 93.2 µg/m³ and with respect to PM_{2.5} are in the range of 33.1 µg/m³ to 46.6 µg/m³ which are within the statutory stipulations in respective case.

It is observed that the peak incremental concentration for PM₁₀, PM_{2.5} is occurring very near the source. At away from the source the values are getting reduced due to dispersion effects no effect is observed.

For preservation of environment in this mine strict enforcement of management schemes will be undertaken for taking corrective actions, as needed. By adopting the effective implementation of all the mitigative measures, no adverse impact on Air quality due to the mining operation in these lease areas is expected.

4.2 WATER ENVIRONMENT:

The domestic effluent to be generated from the project will be collected in septic tank with soak pits arrangements. This being a mining project there will not be any process effluent. The 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. . Towards surface runoff management, 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.

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There are no seasonal drainage courses nearby. Pond / eri located in the nearby area will be additionally strengthened and periodical desilting activities under CER activities will be carried out to augment the storage capacity of the tank.

4.3 NOISE ENVIRONMENT:

During mining operation there will be noise generation due to working of excavators, movement of vehicles, etc. However, it will be felt near the active working area only and at away from its source it will get reduced. Due to natural attenuation effects, by proper green belt development, design / maintenance of machines, etc., the impact on noise levels will be negligible and are expected to be well within the prescribed limits.

4.3.1 VIBRATION:

In the proposed mine workings, blasting & vibration effects will be controlled by following measures.

- Carrying out controlled blasting using suitable initiating sequence and millisecond delay detonators.
- Optimum design for burden and spacing.
- Reducing explosive charge per delay to minimum.
- Using rock breaker wherever possible
- Proper care and supervision during blasting by a competent and experienced person to be carried out.

By adoption of above measures, it will be ensured that ground vibrational levels due to blasting will be maintained within the prescribed DGMS conditions of 10 mm/s for the domestic houses/structures.

4.4 IMPACT ON LAND ENVIRONMENT:

The entire mine lease area of **Thiru S.Kasirajan** of 4.97.0 Ha is a patta land. At the end of the life of the mine, entire 4.29.0 Ha of mined out area will be left as water body. 0.02.0Ha will be the mine roads and 0.66.0Ha will be covered with vegetation.

The entire mine lease area of **Tvl Sri Durgambika Blue Metals** of 1.95.5 Ha is a patta land. At the end of the life of the mine, entire 1.51.0Ha of mined out area will be left as water body. 0.01.0Ha will be the mine roads and 0.43.5Ha will be covered with vegetation.

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In both projects, in the post mining stage it will be ensured that the entire mined out area will be properly fenced to prevent inadvertent entry of men and animals. The rainwater harvested in the mined out void shall be utilized to meet the water requirement.

4.5 BIOLOGICAL ENVIRONMENT:

No major clearance of vegetation is involved in this project. Necessary mitigative measures like dust suppression, proper maintenance of equipments etc., will be carried out to prevent dust generation & any further impact on the vegetation. safety barrier around the mine periphery will be developed with Greenbelt / Plantation to enhance the vegetative growth and aesthetic in the area.

4.6 SOCIO ECONOMIC ENVIRONMENT:

Entire Land is proponents possession. No land acquisition or rehabilitation or resettlement problems are involved..

The mining operations in the proposed mine will provide the following socio economic benefits:

- Employment opportunity.
- Indirect employment opportunity through various service related activities connected with the project operations like:
 - ✓ Project related logistical operations for transport of material
 - ✓ Various trading services for consumer goods, spare parts, sundry items, etc.
 - ✓ Contractual services connected with the project.
 - ✓ Green belt development
- Improvement in educational & medical care system for the locals.
- Benefit to State and central exchequer by way of royalty, taxes.

Towards the socio economic development of the surrounding area, Totally Rs 8 lakhs is earmarked under Corporate Environmental Responsibility. The activities identified under CER will be implemented in a phased manner in the following areas:

- Improved drinking water facility (RO Plant) & betterment of sanitation facilities in neary Government schools .

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- Smart class facilities for nearby Government school.
- Maintenance / Improvement in road facility.
- Desilting of village ponds.
- Assistance in conducting regular health camp, eye camp.

These activities will be planned on a combined basis with the other nearby working quarries and crushers. The priority and need shall be finalized in consultation with the locals.

By carrying out systematic and scientific mining and implementing all the environmental mitigative measures it will be ensured that there will be no adverse impact on this front.

4.7 IMPACT ON LOCAL LOGISTICAL SYSTEM DUE TO PROJECT:

From these proposed quarries the entire output will be transported to the consumers. There will be totally about 11 trips per hour. The transport route can absorb this additional traffic due to this project. The following mitigative measures are suggested for mitigation of adverse impacts on the logistical aspect of the project:

- ❖ Water sprinkling on transport road and Rough stone in the transport vehicles before transporting, so that no dust nuisance during transport will arise.
- ❖ Proper maintenance of transport roads
- ❖ Proper maintenance of transport vehicles.
- ❖ Avoiding overloading of material
- ❖ Covering of loaded vehicles with tarpaulins sheet if warranted.

4.8 OCCUPATIONAL HEALTH AND SAFETY ASPECTS:

In order to ensure minimisation of occupational health and safety problems in the project operation, the following preventive remedial measures will be effectively exercised in the project operations, so as to comply with applicable standards.

- Medical examination of workers at pre-entry level stage of workers, etc., by qualified doctors, with periodical examination of all workers/staff at least once a year, as per DGMS circulars.
- Regular awareness campaigns amongst staff and workers
- Staff will be provided with PPE to guard against excess noise levels, Dust generation and inhalation, etc., as per standards prescribed by DGMS.

4.9 WASTE MANAGEMENT:

There is no process effluent generation from this mine. Hence no liquid waste is generated. 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 ENVIRONMENTAL MONITORING PROGRAME:

Regular, systematic and sustained programme schedules for implementation and monitoring of various control measures are devised with clear cut guidelines of various concerned plans for keeping a continuous surveillance on the various environmental quality parameters in the area. The Mines Manager/Mine Incharge will undertake effective monitoring and implementation of various above said 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. Towards EMP measures, financial provision under capital cost & recurring cost is made.

6.0 CONCLUSION:

By carrying out systematic and scientific mining adhering to all the statutory norms and enforcing and strictly implementing the above said mitigation measures mentioned in this report, it shall be ensured that the future environmental quality in the area will be maintained within statutory limits. The environmental management strategy as explained above will prove that industrial growth, if properly planned with all environmental concerns and appropriate remedial measures can go a long way to improve life pattern of the local community around the project in addition to meeting the construction material requirement.

Considering that the lease period of the existing quarries in the nearby area will be coming to an end in due course and in some existing leases the reserves are getting depleted, the proposed quarries of Thiru S.Kasirajan and Tvl. Sri Durgambika Blue Metals will serve more as a replacement for the existing quarries to ensure meeting the present roughstone demands, continuation of additional employment opportunities without causing substantial additional effect.

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