

# **EXECUTIVE SUMMARY**

For

## **GOONIPALAYAM GRAVEL QUARRY OVER AN EXTENT OF 9.71.0 Ha.**

At

**S. F. Nos: 169/2C4  
Goonipalayam Village,  
Uthukottai Taluk,  
Tiruvallur District,  
Tamilnadu State.**

### **Applicant**

**Thiru. J. Baskar,  
S/o. Thiru. Jayapal,  
No.5/9, 4th Main Road,  
F-Type Sidco Nagar,  
Villivakkam,  
Chennai – 600 049.**

(Project termed under Schedule of 1(a) Mining of Minor Minerals 'B2' category as per EIA Notification 2006 and its Amendments thereafter and As per the O.M issued vide F.No. L-11011/175/2018-IA-II (M), dated: 12.12.2018 the project is termed under Schedule 1(a) Mining of Minor Minerals 'B1' Category)

### **EIA Consultant**

**HUBERT ENVIRO CARE SYSTEMS PRIVATE LIMITED, CHENNAI**

**DECEMBER 2020**

## **EXECUTIVE SUMMARY**

### **I. Project Background**

The total extent area of the quarry is 9.71.0Ha, at S.F. No. 169/2C4 of Goonipalyam Village, Uthukottai Taluk, Tiruvallur District, Tamil Nadu State.

The quarry lease area is a patta land registered in the name of Thiru. Jayanthi lal.K. Patel & Thiru. J. Baskar, vide patta nos. 2432. Precise area communication letter was issued by the District Collector, Tiruvallur vide Rc. No. 251/2016/Mines.2, dated: 20.06.2018.

The project falls under B2 Category, Schedule 1(a) Mining of Minerals as per EIA Notification dated 14<sup>th</sup> September 2006 and its subsequent amendments. But the project is categorized as 'B1' category as per the O.M issued vide F.No. L-11011/175/2018-IA-II (M), dated: 12.12.2018 as the lease area is greater than 5.0Ha. The EC application was submitted under category B1, schedule 1(a) to TN SEIAA vide Proposal No. SIA/TN/NCP/34197/2019 & File No.6768/2019) dated: 04.04.2019

The proposal was appraised during 139<sup>th</sup> SEAC meeting held on 23.11.2019 and 367<sup>th</sup> SEIAA meeting held on 22.01.2020 and ToR was issued vide Lr No. SEIAA-TN/F.No.6768/SEAC/TOR-681/2020 dated: 22.01.2020 for the preparation of EIA/EMP report. Draft EIA report will be submitted for Public Hearing (PH). After PH, the minutes will be incorporated in the EIA report along with action plan by the proponent. Final EIA will be submitted to TNSEAC for further appraisal of the project and obtaining Environment Clearance

### **II. Management Commitment**

Project Proponent will firmly address all the EC and its requirements and will execute the Environmental Management Plan.

### **III. Environmental Sensitive Areas**

As see in Table-I below, there are no notified ecologically sensitive areas, State and National boundary within 15km from Project Boundary. Thus the project does not attract the special conditions and general conditions as per EIA Notification.

**Table-1 Environmental Sensitive areas within 15km of the project**

S. No	Areas	Distance & Direction from the project boundary																																																																																								
1	Areas protected under international conventions, national or local legislation for their ecological, landscape, cultural or other related value	Nil																																																																																								
2	Areas which are important or sensitive for ecological reasons – Wetlands, Watercourses or other water bodies, coastal zone, biospheres, mountains, forests	<p><b>Water Bodies:</b></p> <table border="1"> <thead> <tr> <th>S. No</th> <th>Name</th> <th>Dist. (~km)</th> <th>Dir.</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Sathyamurthi Sgar/Poondi</td> <td>8.48</td> <td>S</td> </tr> <tr> <td>2</td> <td>Telugu Ganga Canal</td> <td>3.51</td> <td>ENE</td> </tr> <tr> <td>3</td> <td>Korttalaiyar R</td> <td>6.58</td> <td>SSE</td> </tr> <tr> <td>4</td> <td>Kushastalai or Nagari R</td> <td>12.75</td> <td>SSW</td> </tr> <tr> <td>5</td> <td>Arani Canal</td> <td>11.17</td> <td>NNW</td> </tr> </tbody> </table> <p><b>Reserve Forest:</b></p> <table border="1"> <thead> <tr> <th>S. No</th> <th>Name</th> <th>Dist. (~km)</th> <th>Dir.</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Pulikundram RF</td> <td>1.8km</td> <td>W</td> </tr> <tr> <td>2</td> <td>Allikuli RF</td> <td>6.56km</td> <td>W</td> </tr> <tr> <td>3</td> <td>Nandanam RF</td> <td>4.82km</td> <td>N</td> </tr> <tr> <td>4</td> <td>Arani River</td> <td>3.89km</td> <td>NNE</td> </tr> <tr> <td>5</td> <td>Ambakkam RF</td> <td>5.27km</td> <td>NNE</td> </tr> <tr> <td>6</td> <td>Mailapur RF</td> <td>2.89km</td> <td>SE</td> </tr> <tr> <td>7</td> <td>Nayappakkam RF</td> <td>5.98km</td> <td>SSW</td> </tr> <tr> <td>8</td> <td>Nayappakkam RF</td> <td>7.23km</td> <td>SSW</td> </tr> <tr> <td>9</td> <td>Vembedu RF</td> <td>7.1km</td> <td>ESE</td> </tr> <tr> <td>10</td> <td>Malandur RF</td> <td>9.59km</td> <td>ESE</td> </tr> <tr> <td>11</td> <td>Senjiyagaram RF</td> <td>7.67km</td> <td>NE</td> </tr> <tr> <td>12</td> <td>Palavakkam RF</td> <td>9.44km</td> <td>NE</td> </tr> <tr> <td>13</td> <td>Rajugunta RF</td> <td>12.38km</td> <td>N</td> </tr> <tr> <td>14</td> <td>Pullarambakkam RF</td> <td>8.92km</td> <td>S</td> </tr> <tr> <td>15</td> <td>Nagalapuram RF</td> <td>14.57km</td> <td>NNW</td> </tr> </tbody> </table>	S. No	Name	Dist. (~km)	Dir.	1	Sathyamurthi Sgar/Poondi	8.48	S	2	Telugu Ganga Canal	3.51	ENE	3	Korttalaiyar R	6.58	SSE	4	Kushastalai or Nagari R	12.75	SSW	5	Arani Canal	11.17	NNW	S. No	Name	Dist. (~km)	Dir.	1	Pulikundram RF	1.8km	W	2	Allikuli RF	6.56km	W	3	Nandanam RF	4.82km	N	4	Arani River	3.89km	NNE	5	Ambakkam RF	5.27km	NNE	6	Mailapur RF	2.89km	SE	7	Nayappakkam RF	5.98km	SSW	8	Nayappakkam RF	7.23km	SSW	9	Vembedu RF	7.1km	ESE	10	Malandur RF	9.59km	ESE	11	Senjiyagaram RF	7.67km	NE	12	Palavakkam RF	9.44km	NE	13	Rajugunta RF	12.38km	N	14	Pullarambakkam RF	8.92km	S	15	Nagalapuram RF	14.57km	NNW
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6	Routes or facilities used by the public for access to recreation or other tourist, pilgrim areas	➤ SH50 Thirumazhisai – Katchur- Uthukottai ~ 2.15km (E) ➤ NH205~ 12.51km (SSW)																																																																																												
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22	Government Primary School Keelanur	14.25	SE
23	Government Primary School Sadhurangapettai	10.18	SSE
24	Vivekananda Vision School	2.19	E
25	Chennai Vidyalaya Matric School	3.65	NNE
26	Qalam International Matric Hr. Sec. School	7.80	SSW
27	Government Primary School Pullarambakkam	10.36	SSE
28	Government Hr Sec School, Pondavakkam	2.58	NE
29	Vivekananda Matriculation Hr Sec School	4.84	NNE
<b>College</b>			
30	Panchayat Union primary School Seethancheri	2.50	ESE
31	Government School Ramanathapuram	2.23	SSE
32	Government High School Goonipalayam	1.71	SW
33	Government School Kamavarapalayam	4.44	SW
34	Sendrayanpalayam Government School	8.94	SSW
35	Govt School Pondavakkam	3.63	ENE
36	Government Boys Higher Secondary School Uthukottai	5.09	NNE
<b>Hospitals</b>			
37	Government Upgraded Primary Health Centre Katchur	2.04	E
38	Govt Hospital Melmaligaipattu	13.87	E
39	Govt Hospital Uthukottai	5.56	NE
40	Primary Health Center Poondi	8.84	S
41	Government Hospital kanagamachathram	14.94	SW
42	dr.KNS.manimaran clinic	5.25	NNE
43	A.V.Poly Clinic	5.61	NNE
44	Hema Leb Hospital	5.38	NNE
45	Dr Shanmugam Hospital	5.61	NNE
46	Govt Hospital Senni	6.51	NNE
47	Julia Hospital	6.56	NE
48	Kanna's Clinic	8.83	S
49	Saviour Clinic	2.15	E
50	Cholai Hospital	7.73	E
51	Govt Hospital Perambur Kandigai	11.73	E
52	C.S .Pragadesh Hospital	3.89	NE
53	Nagalapuram Govt Hospital	12.65	NW
54	Tamilnadu Homeopathy Medicals and Hospitals	13	NW

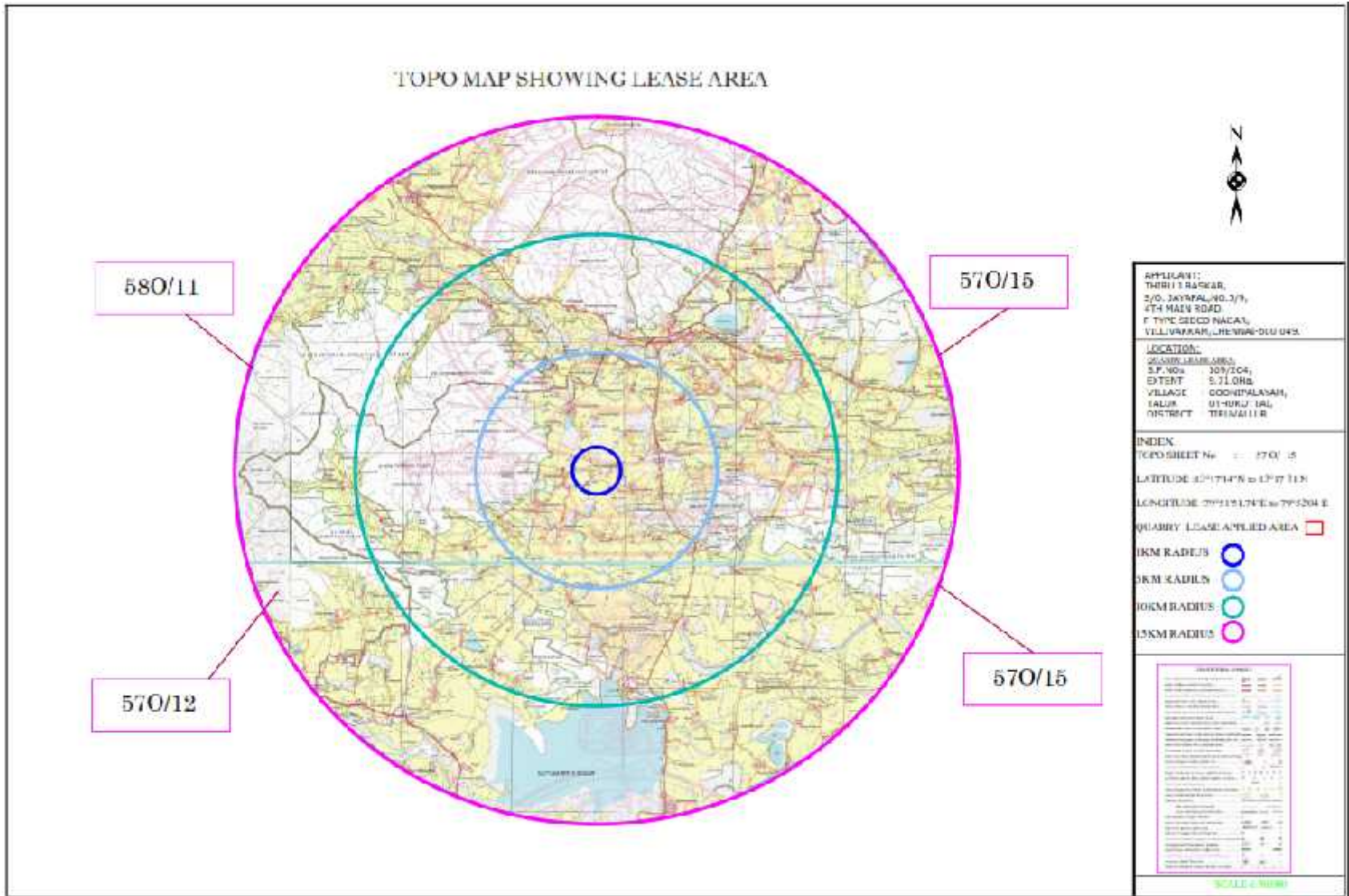
55	CARE Hospital	13.08	NW
<b>Industry</b>			
56	Siddharth Industries	0.26	NNW
57	DMC Automotive	6.14	SE
58	DR Enterprise Automotive Pvt. Ltd	6.20	SE
59	GH India Auto Parts Private Limited	6.29	SE
60	Maruthi Office Equipment Private Limited	7.49	ENE
61	Bekaert Industry	14.38	ENE
62	Michelin India Private Limited	14.75	ENE
63	MEPCRETE AAC BLOCKS	14.90	ENE
64	Bajaj Superpack India Limited	10.11	ENE
65	Suhar Aqua	10.83	SSE
66	Lotus Water Company	14.77	S
<b>Government Building</b>			
67	Post Office Goonipalayam	1.46	WSW
68	pennalur pettai post office	2.10	NNW
69	Forest Range Office Seethanjeri	3.26	SE
70	VAO Office Mylapore	5.33	SE
71	Panchayat Office Pondavakkam	3.79	NE
72	Uthukottai Taluk Office	5.42	NE
73	Village Administrative Office Uthukkottai	5.57	NNE
74	Uthukottai Town Panchayat	5.61	NNE
75	Municipality Office Uthukottai	5.57	NNE
76	Uthukottai Post Office	5.27	NNE
77	Dasukuppam panchayat office	5.71	NNE
78	VAO Office Poondi	8.68	S
79	Forest Development Office Poondi	9.37	SSE
80	Panchayat Office Pullarambakkam	14.55	S
81	UKT Police Station	5.10	NNE
82	Police Station Nagalapuram	13.11	NW
83	Police Station Kanakammachathram	14.84	SW
84	Ration Shop Perandur	8.64	ENE
85	VAO Office Palavakkam	10.45	ENE
86	Panchayat Assembly Office Soolaimeni	12.97	ENE
87	Panchayat Office Kakkavakkam	14.85	E
88	Panjayat Office Meyyur	9.64	ESE
89	Post Office Nagalapuram	12.93	NW
90	MPDO Office Nagalapuram	13.14	NW
91	MeeSeva Center Nagalapuram	13.21	NW
<b>Religious Places</b>			
92	Pallikonda Swamy Suruttapalli Sivan Temple	4.74	N
93	Shri Vedanarayana Swamy Temple	12.95	NW
94	Shri Oondreeswarar Shiva Temple	8.86	S
95	Agneeswarar Temple	8.91	SSW

		96	Shri Paapahareshwarar Temple	6.67	ENE
		97	SRI MAGA KALA BAIRAVAR TEMPLE	7.15	NE
		98	Sri Ankalamman Temple	2.67	S
		99	Sri kollapuri Amman Temple	6.82	S
		100	Shri Poongavanathamman Temple	7.16	SSE
		101	Sundara Varadharaja Perumal Temple	9.48	ESE
		102	Shri Palayathamman Temple	1.82	NNW
		103	Sri Mathamma Temple	5.45	NW
		104	Sri ankalaparameswari ammavari temple	5.48	N
		105	Kanchipadi -Kanni Amman Temple	11.46	SW
		106	Angalamman temple	4.59	SW
		107	Sree Kalahasti Sivan Kovil	8.88	ENE
		108	Sri Venkateswara Swamy Vaari Temple	5.68	NNE
		109	JAMIA MASJID KOTTAI	6.22	NE
		110	Mosque-Nelvoy	2.96	S
		111	Masjid E Ayisha	14.89	SE
		112	The Pentecostal Mission	6.26	NE
		113	csi st johns chruch	13.34	SSE
		114	CSI PG Cochran Memorial Chruch	0.41	SW
		115	Moongathamman Temple	1.28	W
		116	Sri Sri Veerabhadra Swamy Temple	8.52	NE
		117	Sri karumari Amamn Temple	4.76	NNE
		118	Sri Venkateswara Temple, Dasukuppam	5.47	NNE
		119	Neelakandeshwarar Temple	5.66	NNE
		120	Sri Ellai Amman Temple	5.97	NNE
		121	CSI Victorious Cross Church	4.77	NNE
		122	Our Lady of Refugee Church	5.71	NNE
		123	Victory Christian Assembly Church	4.14	NE
		124	Shalom Church Tarakshi	7.92	ENE
		125	CSI church	6.47	E

10	Areas containing important, high quality or scarce resources (ground water resources, surface resources, forestry, agriculture, fisheries, tourism, minerals)	<b>Water Bodies:</b>			
		<b>S. No</b>	<b>Name</b>	<b>Dist. (~km)</b>	<b>Dir.</b>
		1	Sathyamurthi Sgar/Poondi	8.48	S
		2	Telungu Ganga Canal	3.51	ENE
		3	Korttalaiyar R	6.58	SSE
		4	Kushastalai or Nagari R	12.75	SSW
		5	Arani Canal	11.17	NNW
		<b>Reserve Forest:</b>			
		<b>S. No</b>	<b>Name</b>	<b>Dist. (~km)</b>	<b>Dir.</b>
		1	Pulikundram RF	1.8km	W
		2	Allikuli RF	6.56km	W
		3	Nandanam RF	4.82km	N
		4	Arani River	3.89km	NNE

			5	Ambakkam RF	5.27km	NNE
			6	Mailapur RF	2.89km	SE
			7	Nayappakkam RF	5.98km	SSW
			8	Nayappakkam RF	7.23km	SSW
			9	Vembedu RF	7.1km	ESE
			10	Malandur RF	9.59km	ESE
			11	Senjiyagaram RF	7.67km	NE
			12	Palavakkam RF	9.44km	NE
			13	Rajugunta RF	12.38km	N
			14	Pullarambakkam RF	8.92km	S
			15	Nagalapuram RF	14.57km	NNW
11	Areas already subjected to pollution or environmental damage (those where existing legal environmental standards are exceeded)	Nil				
12	Areas susceptible to natural hazard which could cause the project to present environmental problems, (earthquakes, subsidence, landslides, erosion or extreme or adverse climatic conditions)	The Project Site falls under the Seismic Zone – III (Moderate Risk)				





**Figure 1 Topo map of the project**

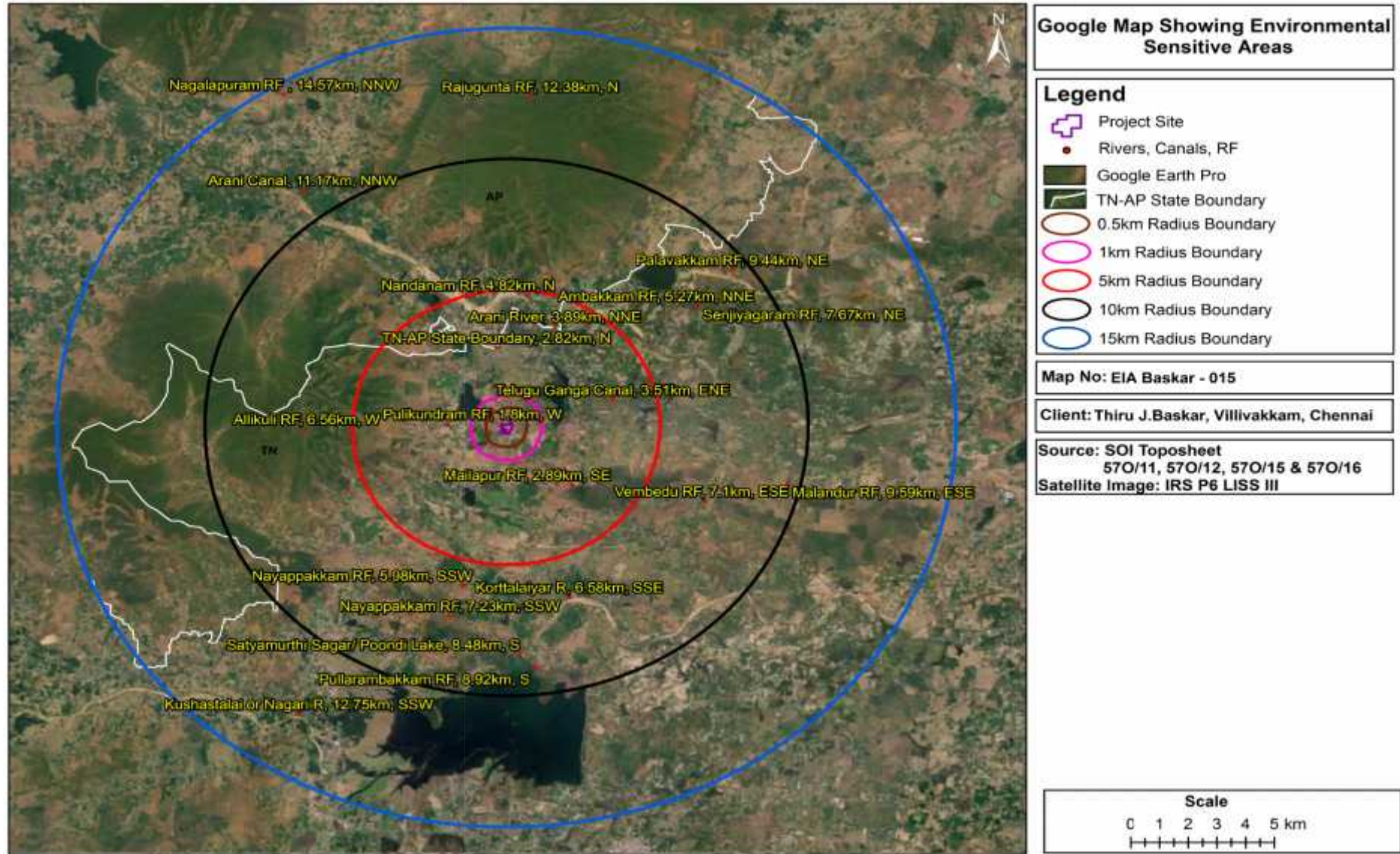


Figure-2 Environmental Sensitive map within 15km from Project boundary

#### IV. Project Description and Requirements

S. No	Description	Details																																																																																												
1	Name of the Quarry	Goonipalayam Gravel Quarry over an extent of 9.71.0Ha.																																																																																												
2	Location	Survey No. 169/2C4, Goonipalyam Village, Thukkotai Taluk, Tiruvallur District, TamilNadu State.																																																																																												
3	Land Classification	Patta Land																																																																																												
4	Precise area communication	The letter was issued for precise area communication by the District Collector, Tiruvallur vide Rc. No.251/2016/Mines.2, dated: 23.03.2018																																																																																												
5	Mining Plan	The Mining Plan was approved by the Deputy Director, Department of Geology and Mining, Tiruvallur vide Rc. No. 251/2016/Mines.2, dated: 20.06.2018.																																																																																												
6	Boundary co-ordinates	<table border="1"> <thead> <tr> <th rowspan="2">Corners</th> <th colspan="2">Co-ordinates</th> </tr> <tr> <th>Latitude</th> <th>Longitude</th> </tr> </thead> <tbody> <tr><td>1.</td><td>13° 17' 16"N</td><td>79° 51' 52"E</td></tr> <tr><td>2.</td><td>13° 17' 17"N</td><td>79° 51' 52"E</td></tr> <tr><td>3.</td><td>13° 17' 17"N</td><td>79° 51' 53"E</td></tr> <tr><td>4.</td><td>13° 17' 17"N</td><td>79° 51' 53"E</td></tr> <tr><td>5.</td><td>13° 17' 17"N</td><td>79° 51' 55"E</td></tr> <tr><td>6.</td><td>13° 17' 17"N</td><td>79° 51' 56"E</td></tr> <tr><td>7.</td><td>13° 17' 17"N</td><td>79° 51' 56"E</td></tr> <tr><td>8.</td><td>13° 17' 18"N</td><td>79° 51' 57"E</td></tr> <tr><td>9.</td><td>13° 17' 18"N</td><td>79° 51' 57"E</td></tr> <tr><td>10.</td><td>13° 17' 19"N</td><td>79° 51' 58"E</td></tr> <tr><td>11.</td><td>13° 17' 20"N</td><td>79° 51' 55"E</td></tr> <tr><td>12.</td><td>13° 17' 19"N</td><td>79° 51' 55"E</td></tr> <tr><td>13.</td><td>13° 17' 19"N</td><td>79° 51' 52"E</td></tr> <tr><td>14.</td><td>13° 17' 21"N</td><td>79° 51' 52"E</td></tr> <tr><td>15.</td><td>13° 17' 21"N</td><td>79° 51' 53"E</td></tr> <tr><td>16.</td><td>13° 17' 21"N</td><td>79° 51' 53"E</td></tr> <tr><td>17.</td><td>13° 17' 22"N</td><td>79° 51' 53"E</td></tr> <tr><td>18.</td><td>13° 17' 22"N</td><td>79° 51' 54"E</td></tr> <tr><td>19.</td><td>13° 17' 23"N</td><td>79° 51' 54"E</td></tr> <tr><td>20.</td><td>13° 17' 23"N</td><td>79° 51' 53"E</td></tr> <tr><td>21.</td><td>13° 17' 23"N</td><td>79° 51' 53"E</td></tr> <tr><td>22.</td><td>13° 17' 23"N</td><td>79° 51' 51"E</td></tr> <tr><td>23.</td><td>13° 17' 26"N</td><td>79° 51' 51"E</td></tr> <tr><td>24.</td><td>13° 17' 26"N</td><td>79° 51' 56"E</td></tr> <tr><td>25.</td><td>13° 17' 25"N</td><td>79° 52' 01"E</td></tr> <tr><td>26.</td><td>13° 17' 27"N</td><td>79° 52' 01"E</td></tr> <tr><td>27.</td><td>13° 17' 27"N</td><td>79° 52' 01"E</td></tr> <tr><td>28.</td><td>13° 17' 31"N</td><td>79° 52' 02"E</td></tr> <tr><td>29.</td><td>13° 17' 30"N</td><td>79° 52' 02"E</td></tr> </tbody> </table>	Corners	Co-ordinates		Latitude	Longitude	1.	13° 17' 16"N	79° 51' 52"E	2.	13° 17' 17"N	79° 51' 52"E	3.	13° 17' 17"N	79° 51' 53"E	4.	13° 17' 17"N	79° 51' 53"E	5.	13° 17' 17"N	79° 51' 55"E	6.	13° 17' 17"N	79° 51' 56"E	7.	13° 17' 17"N	79° 51' 56"E	8.	13° 17' 18"N	79° 51' 57"E	9.	13° 17' 18"N	79° 51' 57"E	10.	13° 17' 19"N	79° 51' 58"E	11.	13° 17' 20"N	79° 51' 55"E	12.	13° 17' 19"N	79° 51' 55"E	13.	13° 17' 19"N	79° 51' 52"E	14.	13° 17' 21"N	79° 51' 52"E	15.	13° 17' 21"N	79° 51' 53"E	16.	13° 17' 21"N	79° 51' 53"E	17.	13° 17' 22"N	79° 51' 53"E	18.	13° 17' 22"N	79° 51' 54"E	19.	13° 17' 23"N	79° 51' 54"E	20.	13° 17' 23"N	79° 51' 53"E	21.	13° 17' 23"N	79° 51' 53"E	22.	13° 17' 23"N	79° 51' 51"E	23.	13° 17' 26"N	79° 51' 51"E	24.	13° 17' 26"N	79° 51' 56"E	25.	13° 17' 25"N	79° 52' 01"E	26.	13° 17' 27"N	79° 52' 01"E	27.	13° 17' 27"N	79° 52' 01"E	28.	13° 17' 31"N	79° 52' 02"E	29.	13° 17' 30"N	79° 52' 02"E
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			41.	13° 17' 16"N	79° 51' 53"E	
7	Mining Methodology	Open Cast Mechanized Mining				
8	List of Machineries	<b>S. No</b>	<b>Machinery</b>	<b>Capacity</b>	<b>Numbers</b>	
		1	Excavator with Bucket	0.60 m <sup>3</sup>	1	
		2	Tipper	10/20Ts	1	
9	Project Categorization	B1 Category, Schedule 1(a) Mining of Minerals				
10	Mine Resources	<b>Description</b>			<b>Gravel (m<sup>3</sup>)</b>	
		Geological Resources			97,100	
		Available Mineable reserves			60,000	
11	Production Details (m <sup>3</sup> )	60,000m <sup>3</sup>				
12	Water Requirement	<b>S. No</b>	<b>Water Requirement</b>	<b>Capacity (KLD)</b>		
		1.	Drinking water & Domestic	0.2		
		4.	Dust Suppression on roads	0.5		
		5.	Green Belt	0.3		
		<b>Total</b>			<b>1.0</b>	
13	Fuel Requirement	<b>S. No</b>	<b>Details</b>	<b>Gravel (Capacity)</b>	<b>Source</b>	
		1	Diesel Requirements approx. (10ltrs/hour)	10,000	HP/BPCL/ IOCL/ Reliance	
14	Man Power requirement	<b>a. Skilled Labour:</b> Mine Foreman : 01 Supervisors : 01 <b>b. Semi-skilled Labour:</b> Excavators Operators : 01 Co-operators : 01 <b>c. Unskilled:</b> Watchman : 01 Unskilled-helpers : 02 <b>Total : 07 No's</b>				

15	Solid Waste Generation Management	<b>S. No</b>	<b>Type</b>	<b>Kg/day</b>	<b>Disposal method</b>	
		1	Organic	2.5	Municipal bin including food waste	
		2	Inorganic	0.65	TNPCB authorized recyclers	
		<b>Total</b>		<b>3.15</b>		
16	Hazardous waste generation	<b>S. No</b>	<b>Waste Category No</b>	<b>Description</b>	<b>Quantity (kL/Year)</b>	<b>Mode of Disposal</b>
		1	5.1	Waste Oil	--	Nil
17	Analysis of Alternative Sites Considered	The entire gravel will be directly loaded into tipper to the needy customers				
18	Project Cost	<b>S. No.</b>	<b>Cost</b>		<b>Cost in Lakhs</b>	
		1	Project Cost/Investment		35,32,000/-	
		2	EMP cost		1,55,000/-	
		<b>TOTAL</b>			<b>36,87,000/-</b>	

#### V. Scope of Baseline Study

<b>S. No</b>	<b>Description</b>	<b>Details</b>				
1	Monitoring Study Period	Jan 2020- March 2020				
2	Meteorological Environment	<b>S. No</b>	<b>Parameter</b>	<b>Observation</b>		
		1.	Temperature	Max Temperature : 35°C Min Temperature : 20°C Avg Temperature : 27.5°C		
		2.	Average Relative Humidity	71.61 %		
		3.	Average Wind Speed	2.87 m/s		
		4.	Predominant Wind Direction	East		
3	Air, Noise, GW & Soil Quality monitoring locations	<b>S. No.</b>	<b>Location</b>	<b>Type of Wind</b>	<b>Distance (km) from Project boundary</b>	<b>Azimuth Directions</b>
		1	Uttukottai	c/w	4.46	NNE
		2	Pondavakkam	c/w	3.45	NE
		3	Kachur	d/w	1.95	E
		4	Chelamakandigai	d/w	0.51	ESE
		5	Nelvai	c/w	2.96	S
		6	Gunipalayam	u/w	1.37	W
		7	Near Project Site	u/w	0.31	W

		8	Yelamakandigai	c/w	1.51	NNW
4	Surface Water Sampling Locations	<b>S. No</b>	<b>Name of the Water body</b>	<b>Location Code</b>	<b>Distance from Project Boundary</b>	<b>Direction from project boundary</b>
		1	Arani River u/s	SW1	4.45	N
		2	Arani River d/s	SW2	4.54	NNE
		3	Lake near Kalavai	SW3	3.26	E
		4	Lake near Mavandur	SW4	9.5	E
		5	Korttalaiyar R d/s	SW5	7.14	SSE
		6	Korttalaiyar R u/s	SW6	9.25	SE
		7	Satyamurthi Sagar Lake	SW7	3.06	S
		8	Pond near Nelval	SW8	8.63	S

## VI. Baseline Summary of the Study Area

S. No	Parameters	Baseline Status
1	Ambient Air Quality	PM <sub>10</sub> - 50.46 – 61.36µg/m <sup>3</sup> PM <sub>2.5</sub> - 26.39 – 31.58µg/m <sup>3</sup> NO <sub>2</sub> - 16.12 – 26.05µg/m <sup>3</sup> SO <sub>2</sub> - 7.53 – 12.61 µg/m <sup>3</sup>
2	Water Quality	<b>Surface Water:</b> pH - 6.92 to 8.23 TDS - 321 mg/l - 1701 mg/l Total Hardness - 122 mg/l to 574.9 mg/l Chloride - 95.3 mg/l to 757.2 mg/l
		<b>Ground Water:</b> pH - 7.09 and 8.24 TDS - 612mg/l –1412 mg/l Total Hardness - 228 mg/l – 483mg/l Chloride - 163.5 mg/l – 491.2 mg/l
3	Noise Level	<b>Industrial area:</b> Day time : 50.2 dB(A) Night time : 41.3 dB(A) <b>Residential Area:</b> Day time : 51.9 dB(A) to 55.7 dB(A) Night time : 41.5 dB(A) to 44.5 dB(A)
4	Soil Quality	pH - 6.67 to 7.48 EC - 137µmhos/cm to 429 µmhos/cm Nitrogen - 89.5 mg/kg to 195.6 mg/kg Phosphorous - 26.4 mg/kg to 78.2 mg/kg Potassium - 167.5 mg/kg to 253.8 mg/kg
5	Ecology and Biodiversity	The study area comprise of barren land and agricultural cropland. The flora observed in the study area comprises of Azadiracta indica, Ficus bengalensis, Ficus religiosa, Tectona grandis L.f., Tamarindus indica L etc.
6	Socio Economic	The project is in the village of Goonipalyam of Uthukottai Taluk of Tiruvallur District. The population of the district as per 2011 Census is 37, 28,104 which Comprises of 18, 76,062 males and 18, 52,042 females

## VII. Anticipated Environmental Impacts

S. No	Description	Details					
1	Water Environment	<p>The total water requirement is 1.0KLD. The total water requirement met from road tankers suppliers. The Gravel quarry operations will not produce any effluent. No wastewater will be discharged by quarry operation.</p> <p>Domestic sewage is being disposed to septic tank followed by soak pit. Septic Tank will be cleaned periodically.</p> <p>Mine pit water is being used for water sprinkling and greenbelt belt development</p>					
2	Air Environment		<b>Max. Average Base Line Conc. (<math>\mu\text{g}/\text{m}^3</math>)</b>	<b>Estimated Incremental Conc. at source (<math>\mu\text{g}/\text{m}^3</math>)</b>	<b>Total Conc. (<math>\mu\text{g}/\text{m}^3</math>)</b>	<b>NAAQ standard</b>	<b>% contribution of concentration above Base line at source</b>
		PM <sub>10</sub>	61.36	70.142	131.502	100	114.31
		PM <sub>2.5</sub>	31.58	42.085	73.665	60	133.26
		SO <sub>2</sub>	12.61	Negligible	12.61	80	Negligible
		NO <sub>x</sub>	26.05	3.799	29.849	80	14.58
3	Noise Environment	<p>As a preventive measure for the noise reduction the following will be adopted.</p> <ul style="list-style-type: none"> <li>➤ Greenbelt development and maintenance will attenuate the noise level.</li> <li>➤ The designed equipment with noise levels not exceeding beyond the requirements of Occupational Health and Safety Administration Standard will be employed.</li> </ul>					
4	Land Use	<p>The mineral deposits are site specific in nature; hence question of seeking alternate site does not arise. The quarry activity does not change the land use classification of the site.</p>					

## VIII. Other

S. No	Description	Details				
		S. No	Area of Monitoring	Number of Sampling Stations	Frequency of Sampling	Parameters to be Analyzed
1	Environmental Monitoring Program	1.	Meteorology	One	Hourly and Daily basis.	Wind speed and direction, Temperature, Relative Humidity, Atmospheric pressure, Rainfall.
		2.	Ambient Air Quality	2 Stations (In downwind)	Once a month	PM <sub>10</sub> , PM <sub>2.5</sub> , SO <sub>2</sub> , VOC and NO <sub>2</sub>
		3.	Noise	4 (two within plant premises and two outside plant premises)	Once every season	Ambient Equivalent continuous Sound Pressure Levels (Leq) at day and Night time.
		4	Vehicular Emissions	Parking area	Periodic monitoring of vehicles	Air emission and noise, PCU

		5	Solid waste / Hazardous waste	Check conformance to HWM rules	Quantity and Quality monitoring	Physical state, Paint Filter Liquid test (PFLT), Loss On Drying (LOD), Loss On Ignition & Calorific Value.																
		6	Soil	Two Locations within the Project Site	Once season <sup>a</sup>	Physico chemical properties, Nutrients, Heavy metals																
		7	Terrestrial Ecology	Within 10km, around the project	Once in three years	Symptoms of injuries on plants																
		8	Surface/ Ground water quality	One locations within Project Site and one location nearby	Once a season	As per ISO 10500 Standard parameters																
2	Pollution Control Measures	<p>The following air pollution control measures will be adopted:</p> <ul style="list-style-type: none"> <li>➤ Stack will be provided with adequate height for DG Sets.</li> <li>➤ Greenbelt of 1.70.00Ha. of land is allotted for development and maintenance will attenuate the air pollutants.</li> <li>➤ Municipal Solid Wastes including food waste are disposed to municipal bin.</li> <li>➤ Hazardous waste materials will be properly disposed as per the Hazardous and Other wastes (Management and Transboundary Movement) Rules 1989 and subsequent amendment in 2016</li> </ul>																				
3	Green Belt Development	All along the boundary barrier is selected for Green belt development by planting and maintaining native species. The total area for proposed for Green belt is around 1.70.00Ha. out of 9.71.0Ha																				
4	CER plan with proposed expenditure	<table border="1"> <thead> <tr> <th>S. No</th> <th>CER Activity</th> <th>Amount allocated (INR)</th> <th>Remarks</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Sanitation Facilities for Government schools nearby</td> <td>Rs.50,000</td> <td>–</td> </tr> <tr> <td>2</td> <td>Solar panels for Government</td> <td>Rs. 23,740</td> <td>–</td> </tr> <tr> <td colspan="2" style="text-align: center;"><b>Total</b></td> <td><b>Rs. 73,740</b></td> <td><b>–</b></td> </tr> </tbody> </table>					S. No	CER Activity	Amount allocated (INR)	Remarks	1	Sanitation Facilities for Government schools nearby	Rs.50,000	–	2	Solar panels for Government	Rs. 23,740	–	<b>Total</b>		<b>Rs. 73,740</b>	<b>–</b>
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## IX. Summary

As seen above there is no marginal impacts on air, noise, water & soil environments. The green belt will enhance the green coverage in the area & aesthetics. Rain water harvesting will enhance the ground water table. Employment generation is about 18 Nos. Fulfills the market requirement and play a vital role in the construction sectors and thereby reduce imports and address the market demand and Social benefits. CER will provide the well-being of the society and the protection of the environment will help in



conserving the ecosystem. It will also provide employment opportunities to larger population.