

# EXECUTIVE SUMMARY

FOR THE

**DEVELOPMENT OF INDUSTRIAL PARK AT MANALLUR AND  
SOORAPOONDI VILLAGES, GUMMIDIPOONDI TALUK,  
THIRUVALLUR DISTRICT, TAMIL NADU OVER AN EXTENT  
OF**

**279.995HA. (691.587ACRES)**

**VILLAGES: MANALLUR AND SOORAPOONDI**

**TALUK: GUMMIDIPOONDI**

**DISTRICT :THIRUVALLUR**

**STATE: TAMIL NADU**

**Project scheduled under 7 (c) Category A – Industrial Estates Parks/ SEZ  
etc as per EIA Notification 2006 and its amendments**

**( General Condition Applicable)**

**By**



**M/s .STATE INDUSTRIES PROMOTION  
CORPORATION OF TAMILNADU LIMITED**

**19/A, Rukmani**

**Lakshmiopathy Road,**

**Egmore, Chennai – 600 008.**

**CONSULTANTS**

**HUBERT ENVIRO CARE SYSTEMS (P) LTD, CHENNAI – Environmental  
consultant**

**ITCOT LIMITED, CHENNAI – Project Consultant**



## **1. Project background**

SIPCOT propose to establish an Industrial Park at Manallur and Soorapoondi villages Gummidipoondi Taluk, Thiruvallur District, Tamil Nadu-Land area 279.995Ha. (691.587Acres)

The Industrial Park is planned with 10% plotted area for 5(f) category industries (Non-Pharma) and balance 90% for non EC category. Thus, as per the EIA Notification 2006 and its amendments the project is termed under Schedule 7 (c), Category A (If at least one industry in the proposed industrial estate falls under the Category A, entire Industrial Park shall be treated as Category A, irrespective of the area). Besides TN – AP interstate boundary is ~3.13 Km (towards NNW) from the project boundary and Pulicat lake bird Sanctuary is ~5.77 Km (towards NE). Therefore, General Condition is applicable.

Application for ToR was uploaded vide Proposal No. : IA/TN/INFRA1/407090/2022 and the project was taken in 316th EAC meeting held on 16/12/2022.ToR was issued for the project on dated 25/01/2023.Copy of the same is enclosed as Annexure-1.

## **2. Project location**

The Industrial Park is proposed to be located at Manallur and Soorapoondi villages Gummidipoondi Taluk, Thiruvallur District, Tamil Nadu.

The site is located at survey Nos. - 203/1, 204/2, 207/2, 208, 209/1, 209/3,210/1, 210/3, 211, 212/1, 212/3, 213, 214, 215, 216/1, 216/3, 217/1, 217/3,218/1, 218/3, 219/1, 220/1, 223/4, 224, 225/1, 226/1, 227/1, 227/3, 228, 229,230, 231, 232, 233/1, 234/1, 234/3, 235/3, 236, 237/1, 237/3, 238, 239, 240,241, 242, 243, 244, 245, 248, 249, 250, 252, 253, 270/1, 270/8, 274/1, 274/29 at Manallur village and 1, 2, 3, 4, 5, 6/2, 9/1, 9/3, 9/5, 9/6, 9/11, 10/4, 10/9,12/2, 12/3, 12/4, 12/5, 12/6, 12/7, 12/8, 12/9, 12/10, 12/11, 12/12, 12/13,12/14, 12/15, 12/16, 12/17, 13/1, 13/2, 13/3, 13/4, 13/5, 13/6, 13/7, 13/8,13/9,15, 16/1, 37/1, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49 of Soorapoondi villages in Gummidipoondi Taluk, Thiruvallur District.The proposed site is located approximately 2.99 km (S) from SH-52 (Kavaraipettai – Sathyavedu ).

### **2.1 Site Salient features**

**Table 1 Salient features of the project site and surrounding features**

S. No.	Particulars	Details																		
1	site Latitude	13° 26' 26.123"N-13° 27' 29.367"N																		
2	site Longitude	80° 0' 46.323" E- 80° 2' 23.29"N																		
3	Elevation of Project site	~11-29mAMSL (Nature of land :Predominantly Flat terrain with few undulation)																		
4	Present land use	<p>As per Bhuvan 2015-2016, the proposed site is predominantly classified as Barren -Scrub land (85%) with Agriculture- cropand fallow land (15%) .</p> <p>Government of Tamil Nadu has issued Administrative sanctionvide GO No 285 dated 03/08/2018 for alienation of 283.08 Ha of poramboke land to SIPCOT for development of Industrial Park (enclosed as Annexure-1b) and later 3.085 Ha of poramboke land has been excluded vide Thiruvallur District Collector letter no. 14888/2018 dated 10.06.2019, (enclosed as Annexure-1c)</p> <p>As per the revenue records, the entire land (279.995 Ha) is government Poromboke land and classified as under:</p> <table border="1"> <thead> <tr> <th>Landuse Classification</th> <th>Extent (Ha)</th> <th>% of area</th> </tr> </thead> <tbody> <tr> <td>Kallaankuthu</td> <td>227.095</td> <td>81</td> </tr> <tr> <td>Unassessed waste</td> <td>35.055</td> <td>12</td> </tr> <tr> <td>Punjai Anadeenam</td> <td>13.32</td> <td>5</td> </tr> <tr> <td>Nanjai Anadeenam</td> <td>4.525</td> <td>2</td> </tr> <tr> <td><b>Total</b></td> <td><b>279.995</b></td> <td><b>100</b></td> </tr> </tbody> </table>	Landuse Classification	Extent (Ha)	% of area	Kallaankuthu	227.095	81	Unassessed waste	35.055	12	Punjai Anadeenam	13.32	5	Nanjai Anadeenam	4.525	2	<b>Total</b>	<b>279.995</b>	<b>100</b>
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Kallaankuthu	227.095	81																		
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Nanjai Anadeenam	4.525	2																		
<b>Total</b>	<b>279.995</b>	<b>100</b>																		
5	Nearest Highway	SH-52(Kavaraipettai – Sathyavedu Rd) at a distance of ~2.99 km towards SSW.																		
6	Nearest railway Station	Elavur Railway station, ~ 8.21 km, E																		
7	Nearest Airport	Chennai International Airport, ~ 49.71km, SSE																		
8	Nearest Port	Ennore Port ~35.75km, ESE Chennai Port ~45.43km, SE																		
9	Defence Installation	Nil																		
10	Nearest Villages	<table border="1"> <thead> <tr> <th>Villages</th> <th>Pop</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> </tr> </tbody> </table>	Villages	Pop																
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S. No.	Particulars	Details			
		Hamlet(Kunthanimedu)	Adjacent to Site	N	200
		Madarpakkam	Adjacent to Site	W	4,737
		Manallur	0.01km	W	4,534
		Ramachandrapuram	0.08km	S	300
		Sankaranarayanapuram	0.35km	N	350
		Surapundi	0.52km	E	1,480
		Pannur	0.58km	S	400
11	Nearest Town	Gummidipoondi $\approx$ 9.50 km(ESE)			
10	Water bodies	Water Bodies	Dist. (~km)	Direc.	
		Pond	Adjacent to Site	E	
		Pond	Adjacent to Site	S	
		Lake near Manallur	0.04km	W	
		Lake near Pannur	0.19km	S	
		Lake near Madarpakkam	0.30km	SW	
		Lake near Surapundi	0.39km	E	
		Pallavada Lake	0.65km	NW	
		Lake near Ramachandrapuram	0.68km	SE	
		Lake near Sanaputtur	0.80km	E	
		Stream near Iguvarpalaiyam	1.60km	ESE	
		Lake near Rashanagaram	1.89km	W	
		Lake near Nimalur	2.15km	SW	
		Lake near Sitturnattam	2.46km	SE	
		Lake near Vaniyamalli	2.48km	S	
		Lake near Kannambakkam	3.93km	N	
		Puvalambedu Lake	4.14km	S	
		Telugu Ganga/Satya Sai Ganga (TG) Canal	5.52km	W	
		Kannankottai Thervoykandigai Reservoir(KKTK)	7.11km	SSW	
		Egumadurai Lake	7.11km	N	
		Canal near Reservoir	8.86km	SW	
		Pulicat Lake	8.92km	NE	
		Arani R	10.99km	SSE	
		Sulameni Eri	12.35km	SSW	
		Rakkampalaiyam Lake	12.53km	E	
		Chinnambedu Lake	13.88km	SSE	

S. No.	Particulars	Details			
		Ralla Eru	14.04km	NW	
		Uttukkottai Eri	14.74km	SW	
		Note: :*As per TN Revenue records, there is no water bodies located inside the site. However, as per survey of India Topo map, there are two pond located within the site			
12	Reserve Forests and Protected Forests	<b>Reserve Forests</b>	<b>≈ Distance</b>	<b>Direction</b>	
		Nemalur RF	1.13km	WSW	
		Irukulam RF	3km	NNW	
		Sirurvedu RF	3.96km	SSW	
		Panchali RF	4.04km	SSW	
		Satyavedu RF	5.87km	W	
		Palavakkam RF	7.31km	S	
		Manali RF	7.69km	S	
		Vanallur RF	8.09km	WNW	
		Arudur RF	9.10km	NW	
		Rajugunta RF	9.54km	WSW	
		Amb kkam RF	11.21km	WSW	
		Kaduru RF	11.37km	NNW	
Senjiyagaram RF	13.95km	SW			
13	Notified Wildlife Sanctuary/ National Parks	<b>Sanctuary</b>	<b>≈Distance</b>	<b>Direction</b>	
		Pulicat Bird Sanctuary	5.77km	NNE	
14	Inter State Boundary	<b>Inter state boundary</b>	<b>≈Distance</b>	<b>Direction</b>	
		TN-AP State Boundary as per SOI	3.13km	NNW	

## 2.2 Magnitude of operation

Total area of Industrial Park is 279.995 Ha (691.587 Acres). Land area breakup for the Industrial Park is given in Table 2. Total number of industrial plots proposed is 131

**Table 2 Area break up for the Proposed Industrial Park**

Area break up	During 316th EAC Meeting- ToR PPT			Revised for EIA		
	Acres	Ha	Percentage of developable area (%)	Acres	Ha	Percentage of developable area (%)
Plotted area (Including 33% green belt)	514.540	208.316	74.40%	490.800	198.704	70.97%
Common amenities	11.390	4.611	1.65%	19.040	7.709	2.75%
Commercial activities	20.750	8.401	3.00%	20.750	8.401	3.00%
Solid waste management	5.000	2.024	0.72%	5.000	2.024	0.72%
Road, storm water drains	52.300	21.174	7.56%	54.720	22.154	7.91%
Total green belt Area	87.607	35.469	12.67%	101.277	41.003	14.65%
<b>Developable area</b>	<b>691.587</b>	<b>279.995</b>	<b>100.00%</b>	<b>691.587</b>	<b>279.995</b>	<b>100.00%</b>

### 2.3 Raw materials

The project proposal is development of Industrial Park. Different type of industries are proposed for the project. Raw materials will be provided by Individual industries upon establishment while obtaining CTE / CTO

## 2.4 Water requirement

### Construction Phase:

During the construction phase, the water requirement for the project is calculated as 63 KLD and same will be sourced from Private water suppliers. Approximate people working will be around 100 Nos. Only infrastructure development like provision of storm water drain, laying of roads, water supply line, providing substation, green belt in common area, common facilities are under the scope of SIPCOT. The construction period for infrastructure facilities is estimated to be 24 months.

### Operation Phase:

Total water requirement for the project during operation phase is 5956 KLD. Fresh water requirement of 685 KLD and TTRO water requirement of 3365 KLD will be sourced from Chennai Metropolitan Water Supply and Sewerage Board (CMWSSB). The balance water of 1906 KLD will be met from recycling of treated wastewater. Letters from CMWSSB for the supply of raw water from SIPCOT Industrial Park, Thervoykandigai (from Red Hills) and TTRO water from Kodungaiyur TTRO plant are enclosed as Annexure-7.

**Table 3 Water Requirement for the project**

S.No	Water Usage	Fresh water (KLD)	TTRO Water (KLD)	Recycled water (KLD)	Total water(KLD)
1	Domestic	405	0	0	405
2	Process & Utilities	280	0	1541	1821
3	Green belt development	0	3365	365	3730
	<b>Total</b>	<b>685</b>	<b>3365</b>	<b>1906</b>	<b>5956</b>

## 2.5 Power and fuel requirement

Power requirement for the Industrial Park is estimated to be 28 MVA. SIPCOT will earmark requisite land for TANGEDCO for the establishment of exclusive substation for the industrial park. Supply and distribution systems will be installed by TANGEDCO. Individual industries will have their own power back up. SIPCOT will not propose any power back up for other common facilities.

## 2.6 Manpower requirement

Approximately 100 employees will be required for the construction Period, inclusive of Workmen, Supervisors, Engineers, Architects and Managers. During operation phase, the estimated population will be 9,000 people.

## 2.7 Project Cost

**Table-4 Estimated project cost**

S.No	Components	Total Cost (Rs. in crores)
1	Land alienation cost	119.28
2	Site Development	0.56
3	Development of Roads (including storm water drains, rainwater harvesting, approach road, Solid waste management)	102.55
4	Water Supply scheme	52.79
5	Common Facilities	13.6
6	Street light	5.52
7	Greenbelt Development	3.25
8	Contingency	42.59
9	Preliminary and Preoperative expenses	13.14
<b>Total cost of project</b>		<b>353.28 crores</b>

## 2.8 Municipal Solid Waste generation and Management

Municipal Solid waste generation and management for the proposed project is detailed in Table 5.

**Table 5 Municipal Solid Waste generation and Management**

S.No	Municipal Solid waste	Construction phase (kg/day)	Operation phase (kg/day)	Disposal Method
1	Organic waste	27	2430	Individual industries will segregate the waste and organic waste will be composted and used as manure.
2	Inorganic waste	18	1620	Sold to TNPCB authorized recyclers by individual industries

## 2.9 Hazardous waste generation and management

Hazardous wastes generated from the allotted industries will be managed by the industries and it will be stored in designated areas within their premises and disposed as per Hazardous waste (Management and Transboundary) Rules 2016.



### 3. Environmental Baseline Data

Baseline data was generated for the project during Mid of January – Mid of April 2023.

#### 3.1 Micrometeorology

Details are given in Table 6.

**Table 6 Micrometeorological data during study period**

S. No	Parameter	Observation
1.	Temperature	Max Temperature : 38 <sup>0</sup> C Min Temperature : 21 <sup>0</sup> C Avg Temperature :28.06 <sup>0</sup> C
2.	Average Relative Humidity	74.46%
3.	Average Wind Speed	2.97 m/s
4.	Predominant Wind Direction	East

#### 3.2 Ambient Air Quality

The ambient air quality was monitored at 8 locations for 12 parameters as per CPCB guidelines within the study area from Mid of January – Mid of April 2023. The baseline levels were

- PM10 ranged from 45.26 to 61.28  $\mu\text{g}/\text{m}^3$ ,
- PM 2.5 ranged from 22.33  $\mu\text{g}/\text{m}^3$  to 41.16  $\mu\text{g}/\text{m}^3$ ,
- SO<sub>2</sub> ranged from 6.51  $\mu\text{g}/\text{m}^3$  to 9.22  $\mu\text{g}/\text{m}^3$ ,
- NO<sub>2</sub> ranged from 12.14  $\mu\text{g}/\text{m}^3$  to 23.15  $\mu\text{g}/\text{m}^3$ ,

All the parameters are well within the National Ambient Air Quality Standards for Industrial, Commercial and Residential areas at all monitoring locations during the study period.

### **3.3 Ambient noise Quality**

Noise levels were monitored at 8 locations within the study area.

In residential areas area day time noise levels varied from 38.1 dB (A) to 43.3 dB (A) and night time noise levels varied from 35.1dB(A) to 40.2dB(A) across the sampling stations. The field observations during the study period indicate that the ambient noise levels in Residential area are within the limit prescribed by CPCB for Residential area (55 dB (A) Day time & 45 dB(A) Night time).

### **3.4 Surface water Quality**

Surface water quality was monitored at 8 locations within the study area.

- pH in the collected surface water samples varies between 7.51 –8.47.
- The Total Dissolved Solids range from 66 mg/l to 20198.1 mg/l. Higher values are seen in Pulicat Lake due to the mixing of sea water at the estuary.
- The chloride content in the surface water for study area ranges from 13.36 mg/l to 11995 mg/l. Higher values are seen in Pulicat Lake due to the mixing of sea water at the estuary.
- The sulphate content in the surface water of the study area varies between 8.72 mg/l – 1973 mg/l. Higher values are seen in Pulicat Lake due to the mixing of sea water at the estuary.
- The Total hardness ranges between 30 mg/l – 4122.1 mg/l. Higher values are seen in Pulicat Lake due to the mixing of sea water at the estuary.
- BOD value of the collected surface water sample ranges upto 51.1 mg/l. Higher values are seen in Pulicat Lake due to the mixing of sea water at the estuary.
- COD value of collected surface water varies from 21.3 to 93.5 mg/l. Higher values are seen in Pulicat Lake due to the mixing of sea water at the estuary.
- The concentration of heavy metals like As, Cd, Cr, Pb, Mn, Hg, Ni and Se are within the limits of IS 2296:1992.

### **3.5 Ground water Quality**

- The pH of the collected ground water sample ranges from 6.59 to 7.36.
- The concentrations of Chloride in the collected ground water sample ranges from 106 to 211 mg/l.
- Total Dissolved Solids (TDS) value of the collected ground water sample varies from 278 mg/l to 493 mg/l.
- Total hardness of the collected ground water sample ranges from 194 mg/l to 332 mg/l.
- The concentrations of Sulphate in the collected ground water sample ranges from 51 to 75mg/l.
- The Total hardness range is between 220 mg/l – 379 mg/l for ground water samples. It is observed that all the samples are within the permissible limit of the IS 10500: 2012.
- It is observed that all ground water samples collected within the study area are meeting the drinking water standards IS10500:2012.

### **3.6 Soil quality**

- The pH of the soil samples ranged from 6.87 to 7.21.
- Conductivity of the soil samples ranged from 146 to 240  $\mu\text{mho/cm}$ .
- Nitrogen content ranged from 114.3 kg/ha to 312.1 kg/ha.
- Phosphorous ranged from 19.64 kg/ha to 43.61 kg/ha.
- Potassium content ranges from 101.2 kg/ha to 214.3 kg/ha.

### **3.7 Ecology**

Pulicat lake bird Sanctuary is ~5.77 Km (towards NE).

### **3.8 Socioeconomic environment**

Socio economic indicators of study area are given in Table 7 below.

**Table 7 Socio economic indicators of study area**

S.No	Particulars	Study area	Unit
<b>0-5 Km</b>			
1	Number of villages in the Study Area	11	Nos.
2	Total Households	8594	Nos.
3	Total Population	32958	Nos.
4	Children Population (<6 Years Old)	3644	Nos.
5	SC Population	10513	Nos.
6	ST Population	2007	Nos.
7	Total Working Population	15253	Nos.
8	Main Workers	11685	Nos.
9	Marginal Workers	3568	Nos.
10	Cultivators	1167	Nos.
11	Agricultural labours	7346	Nos.
12	Household Industries	623	Nos.
13	Other Workers	6144	Nos.
14	Literates	20801	Nos.
15	Illiterates	12157	Nos.
<b>5-10 Km</b>			
1	Number of villages in the Study Area	54	Nos.
2	Total Households	26928	Nos.
3	Total Population	103930	Nos.
4	Children Population (<6 Years Old)	11611	Nos.
5	SC Population	28061	Nos.
6	ST Population	3689	Nos.
7	Total Working Population	45489	Nos.
8	Main Workers	36351	Nos.
9	Marginal Workers	9138	Nos.
10	Cultivators	5217	Nos.
11	Agricultural labours	19824	Nos.
12	Household Industries	1063	Nos.
13	Other Workers	19385	Nos.
14	Literates	65178	Nos.
15	Illiterates	38752	Nos.

#### 4. Impact on Air environment

Air quality modelling was done using AERMOD software to identify the ground level concentration due to operation of proposed industries. The details on the type of fuel proposed, emissions are given in Table 4-1 of the EIA report. Based on the modelling done, the total ground level concentrations from point source, line source and Cumulative are given in Table 8, Table 9 and Table 10 respectively

**Table 8 Total concentration from point source**

Pollutant	Max. Baseline Conc.	Estimated Incremental Conc. ( $\mu\text{g}/\text{m}^3$ )	Total Conc. ( $\mu\text{g}/\text{m}^3$ )	NAAQ standard ( $\mu\text{g}/\text{m}^3$ )	% increase
PM10	72.83	0.49	73.32	100	0.67
SO <sub>2</sub>	10.95	0.46	11.41	80	4.2
NO <sub>x</sub>	27.51	3.60	31.11	80	13.08
CO	330	6.10	336.1	4000	1.84

**Table 9 Total concentration from Line Source**

Pollutant	Max. Baseline Conc. ( $\mu\text{g}/\text{m}^3$ )	Estimated Incremental Conc. ( $\mu\text{g}/\text{m}^3$ )	Total Conc. ( $\mu\text{g}/\text{m}^3$ )	NAAQ standard ( $\mu\text{g}/\text{m}^3$ )	% increase
PM10	72.83	0.08	72.91	100	0.10
NO <sub>x</sub>	27.51	2.51	30.02	80	9.12
CO	330	50.81	380.81	4000	15.39

**Table 10 Total concentration from Cumulative source**

Pollutant	Max. Base line Conc. ( $\mu\text{g}/\text{m}^3$ )	Estimated Incremental Conc. ( $\mu\text{g}/\text{m}^3$ )	Total Conc. ( $\mu\text{g}/\text{m}^3$ )	NAAQ standard ( $\mu\text{g}/\text{m}^3$ )	% increase
PM10	72.83	0.50	73.33	100	0.68
SO <sub>2</sub>	10.95	0.46	11.41	80	4.2
NO <sub>x</sub>	27.51	3.66	31.17	80	13.30
CO	330	50.81	380.81	4000	15.39

From the above table, it is evident that from the proposed project, the Total Concentration for PM10, SO2, CO and NOx are well within the NAAQ Standards.

Following mitigation measures are proposed

- Individual industries will provide Air pollution control devices (such as Scrubers ,Bag filters etc) apart from this individual industries will be mandated to provide 33% greenbelt along the periphery.
- Individual industries will be instructed to provide proper stack height for DG sets, furnaces& boilers as per CPCB/ TNPCB guidelines.
- Ambient air quality monitoring will be carried out regularly at selected locations in order to check and compare the predicted concentrations with the measured concentrations. NAAQS exceedance if any may be checked thoroughly and adequacy /Performance of Air Pollution Control measures shall be reviewed.
- Water sprinkling will be carried out on road surfaces in the project area.
- Adequate Green belt area will be provided in the park viz 15m peripheral green belt along the boundary,additional 35m near habitat areas(to maintain 50 m as per ToR condition),33% area by individual industries ,3m along road side and in other areas.Overall green belt area of the park will be 106.575 Ha i.e 38.07% of developable area

## **5. Alternate site consideration**

SIPCOT considered three alternative sites based on the need for promoting an Industrial Park in the proposed project location. Industrial growth, preciously, require good connectivity to the urban areas and other facilities like port, airports etc. Hence only, the present location is proposed.

The alternative sites considered as per SOI Topo map were:

- Site-I: Arur (Kannambakkam)
- Site II: Sanaputhur, Iguvarpalaiyam & Lakshminarasimapuram
- Site III: Manallur and Surapundi (hereinafter referred as Manallur and Soorapoondi villages as per land alienation GO Ms No 285).

Based on the Result of site matrix, Manallur & Soorapoondi Villages is selected for development of this Industrial Park

## **6. Environmental Monitoring Programme**

A monitoring schedule with respect to Ambient Air Quality, Water Quality, Soil and Noise as per CPCB/MoEF&CC will be adopted during construction phase and after establishment of the project.

## **7. Public Hearing**

The Draft EIA report is being submitted to TNPCB for conducting Public hearing.

## **8. Rehabilitation and Resettlement**

There is no R & R for the proposed Originally, Administrative Sanction was given for acquisition of 303.75 Ha (300.765 Ha of poramboke land and 2.985 Ha of patta land) for the development of Industrial Park at Manallur vide G.O (Ms) No.119 dated 07.06.2013. The same is enclosed as Annexure-2a. Later, poramboke land extent was reduced to 283.08 Ha vide Government of Tamil Nadu land alienation G.O(Ms)No.285 dated 03/08/2018, enclosed as Annexure -2b. Further, 3.085Ha of poramboke land has been excluded vide Thiruvallur District Collector vide letter no. 14888/2018 dated 10.06.2019, enclosed as Annexure -2c and 2.985Ha of patta land is also excluded from land acquisition and the total area of the Industrial Park is reduced to 279.99.5 Ha.Land Delivery Receipt in proof of taking over possession of 279.99.5 Ha of poramboke land from Zonal Deputy Tahsildar along with survey number wise land extent and classification is enclosed as Annexure-2d.

## **9. Environmental Management Plan**

### **9.1 Air Environment**

- The major air pollution sources from the industries will be DG set, Boilers Vehicular movements and other emissions. Individual industries will have air Pollution control measures as per CPCB/ TNPCB norms to disperse the pollutants. Adequate green belt will be developed to mitigate the pollution arising due to movement of vehicles.

## **9.2 Water Environment**

- During operation phase, individual industries will have their own STP/ETP as applicable to treat the sewage /effluent generated. Zero Liquid Discharge system will be proposed by individual industries. Treated sewage will be recycled for green belt development and treated effluent will be recycled for process & utilities within the industry. Rejects from RO will be taken to MEE/ATFD and the condensate will be again recycled to utilities/ process. MEE /ATFD salt will be disposed as hazardous waste by individual industries.

## **9.3 Noise Environment**

Individual industries will adhere to the following measures to mitigate negative impact of operation phase of the project on the surrounding noise environment.:

- All the noise generating equipments will be designed / operated to ensure that noise level does not exceed 55-45 dB (A) at plant boundary as per the requirement of Central / State Pollution Control Board.
- Noise generating sources will be maintained properly to minimize noise generated by them.
- Wherever feasible, acoustic enclosures will be provided for compressors, DG sets.
- Compliance with noise control norms will be given due importance at the time of purchase of various equipments and it will be mentioned while placing the purchase orders and guarantee for noise standards will be sought from suppliers.
- Green belt will act as a noise barrier.
- Training will be imparted to personnel to generate awareness about effects of noise and importance of using PPEs.

## **9.4 Land Environment**

Following measures are proposed to mitigate negative impact during operational phase of the project on the land environment.

- Organic Solid wastes generated during the operation phase will be composted by individual industries and used as manure. Inorganic solid Wastes will be sold to authorised recyclers.
- Individual industries will have their Air Pollution control Measures to control the release of air pollutants to a greater extent. In addition, thick green belt will attenuate air pollutants released into the environment.
- During operation phase, individual industries will have their own STP/ETP as applicable to treat the sewage /effluent generated.
- Zero Liquid Discharge system will be proposed by individual industries



- Noise generating sources will be maintained properly to minimize noise generated by them.
- Green belt development will help in abatement of air and noise pollution and will improve the aesthetics of the Industrial Park

#### **9.6 Budgetary provisions for EMP**

Capital cost of INR 12.25 Crores has been allocated for Environmental Management measures. Details are given in Table14.

**Table 14 Budget for Environmental Management Plan**

<b>S.No</b>	<b>Project Components</b>	<b>Capital Cost (INR Lakhs)</b>	<b>Recurring Cost (INR.Lakhs)</b>
1	Solid Waste Management Facility	800.00	64
2	Greenbelt development	325.00	32.50
3	Rain water harvesting	100.00	8
	<b>Total EMP Cost</b>	<b>1225.00</b>	<b>104.50</b>

#### **9.7 Proposed CER activities**

As per the MoEF&CC Office Memorandum No. 22-65/2017-IA.III, dated 25.02.2021, SIPCOT will allocate INR 12.25 Crores towards Environment Management Plan (EMP) instead of allocation of funds under Corporate Environment Responsibility (CER).

#### **10 Project Benefits**

- There will be positive impact on social conditions in and around the site due to the proposed project.
- There will be increase in market and business establishment facilities.
- Proposed project will also attract generation of additional revenue to the Government by means of Taxes and duties.
- Growth in exports.
- Investment Catalysation.