EXECUTIVE SUMMARY

1.0 Introduction

M/s. Meenakshi Meenakshi Steel Re-Rollers is situated in S.F. Nos. 478/1, 478/2, 478/3, 478/4A, 479/1, 479/2A, 480/1 & 480/2 at Varappatti Village, Sulur Taluk, Coimbatore (Dist.), Tamil Nadu and is proposed to manufacture MS Billets (Intermediate product) with a capacity of 1,45,000 TPA and TMT Bars (Final Product) with a capacity of 1,40,000 TPA The total land area of the plant is 94979.72 Sq.m.

The unit obtained Standard terms of reference (TORs) issued by the MoEF&CC, GOI, vide TOR letter No. SEIAA-TN/F.No.7776(3a)/ToR-833/2020 dated 02nd February, 2021.

Total Cost of the proposed Project is Rs. 13.0 Cores. An investment of Rs. 3.0 Crores is proposed on environmental infrastructure development.

2.0 Location of the Plant

M/s. Meenakshi Steel Re-Rollers is located at S.F. Nos. 478/1, 478/2, 478/3, 478/4A, 479/1, 479/2A, 480/1 & 480/2 at Varappatti Village, Sulur Taluk, Coimbatore (Dist.), Tamil Nadu.

Project site falls between Latitude 10°54'9.81"N and 10°54'10.72"N & Longitude 77°12'12.54"E and 77°11'59.26"E.

The nearest human settlement from the site is Kandampalaiyam village located at a distance of 0.51 KM from the site. The nearest railway station is Irugur Railway Junction at a distance of 19.15 km in NW direction from the site. Nearest Water Body is Senjeri Karai – 4.72 Km SW, Vadavedampattai karai – 4.53 Km SSE. There are no Reserve Forests within 10 KM radius of the site.

A total of 21 villages and towns with a total population of 77,418 are existing in the 10KM radius of the site.

There are no ecologically sensitive zone, National Parks or wild life sanctuaries within 10 KM radius of the site.

2.1 Road Connectivity

The major road access to the site is Pollachi Highway, which is at a distance of 1.02 KM on the West. Project Site to Panapatti Road is adjacent to the plant site, which connects to Pollachi Highway.

3.0 Justification of the Project

Secondary steel industry is having its strong presence in Tamil Nadu State. Nearly 50 Medium and large scale steel industries are working in the state. The industrialization in the state is supported by:

- Good infrastructure
- Availability of skilled manpower
- Government's positive attitude towards the industrialization
- Presence of Entrepreneurs with steel industry back ground

M/s. Meenakshi Steel Re-Rollers is in forefront in the last 10 years with excellent customer base and markets. The demand for Rolled Mill products such as TMT Bars is increasing existing infrastructure and land availability at the current site in prompted the industry to increase the production levels. The project is justified in techno commercial point of view.

4.0 PROJECT DESCRIPTION

4.1 The salient feature of the project is given in the table below

Table-1.0

SALIENT FEATURES OF THE PROJECT

FEATURE	DETAILS
PROJECT	
Proposed Production capacity	MS Billets – 1,45,000 TPA TMT Bars – 1,40,000 TPA
Land Requirement	Total land is 9.495 Hectares
Total Project cost	Rs. 13.0 Crores

Raw Materials Required	Sponge Iron, MS Scrap, Pig Iron and Ferro Alloys
Total Water requirement	Proposed – 119.0 KLD (19.0 KLD Fresh water + 100.0 KLD Recycled Water) Source of water is Local Panchayat
Power Requirement	Total Power requirement – 9900 KW Source from TANGEDCO
Man Power Requirement	Proposed – 200
Total Waste Water generation	9.0 KLD of Domestic waste water which will be treated and re-used for plantations 100.0 KLD of Cooling and scrubbing water is recycled back
Green Belt	Proposed – 3.75 Hectares
Solid waste	Slag from induction furnace (8700 TPA), Mill waste of (1318 TPA), waste scrap (4156) are the main solid wastes estimated to be generated. All these wastes have commercial re-use value.

4.2 Product Profile

The details of proposed installations and products with production capacity are presented in the following table.

Table-2.0

Proposed Production capacity

S.NO	Product	Capacity TPD	Production TPA
1	MS Billets	397.26	145000
2	TMT Bars	383.56	140000

5.0 Environmental Impact Assessment

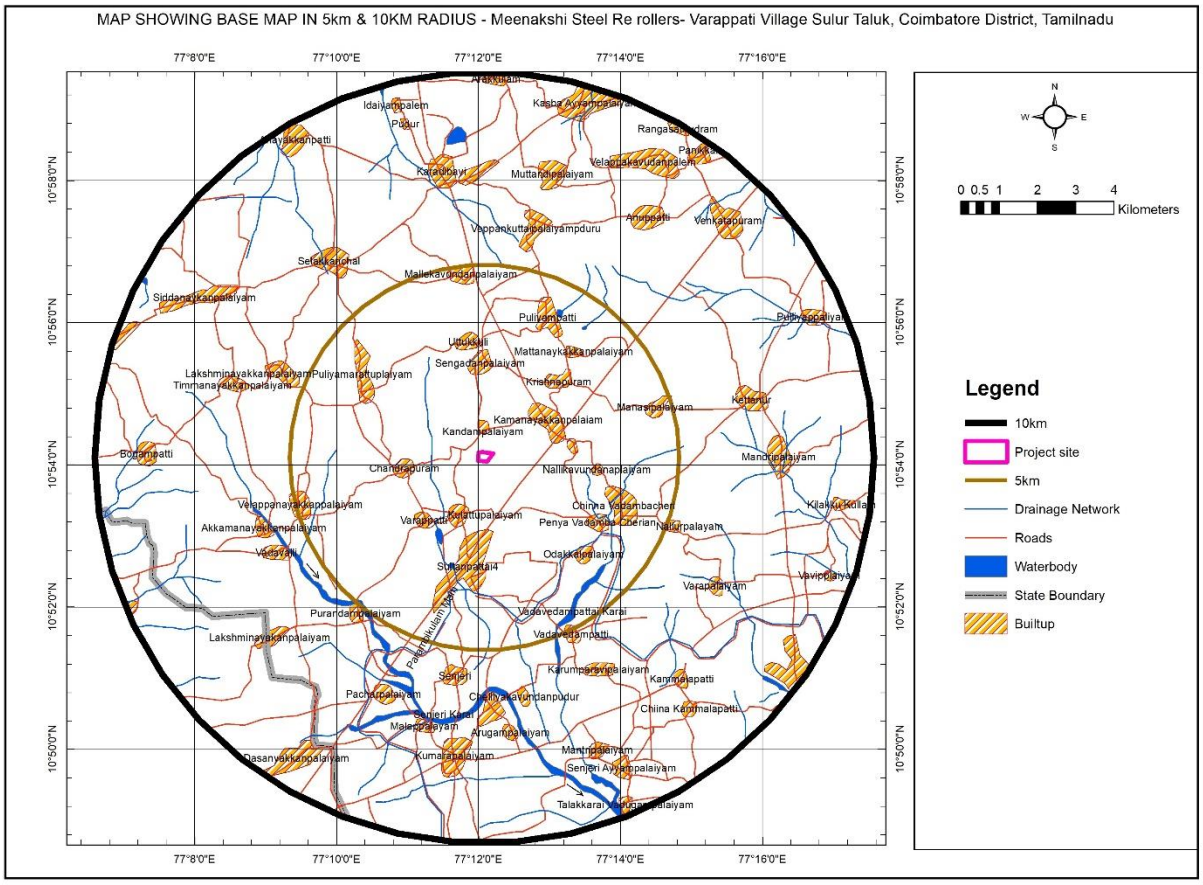
The unit obtained Standard terms of reference (TORs) issued by the MoEF&CC, GOI, vide TOR letter No. SEIAA-TN/F.No.7776(3a)/ToR-833/2020 dated 02nd February, 2021.

6.0 Description of Environment

6.1 Study Area

An area covering 10KM radius from the plant boundary has been taken for studying base line terrestrial environmental Survey. A base map showing the study area is given at ES01

Fig ES 01: Base map of the study Area



6.2 Study Period

The base line environmental Survey was carried out between March – May, 2021.

6.2.1 Terrestrial Environment

- The land use of current site is Unclassified and the unit has been proposed with total land area of 9.495 Hectares
- As per the project specific meteorological data the predominant wind direction is from SSW and Eastern direction

- The Project location fall under Earth Quake Zone III (Moderate Seismic zone) and it is not coming under flood zone

The maximum air quality concentration in the project site and buffer area are

  - PM10 ranged between 29.7 µg/m3 75.4 µg/m3. NAAQ stipulated standard for PM10 for 24 hr. average is 100 µg/m3.
  - PM 2.5 values varied from 24.0 µg/m3 to 39.0 µg/m3. NAAQ stipulated standard for PM2.5 for 24 hr. average is 60 µg/m3.
  - SO2 varied from 9.6 µg/m3 18.3 µg/m3. NAAQ stipulated standard for SO2 for 24 hr. average is 80 µg/m3.
  - NO2 ranged between 15.7 µg/m3 33.7 µg/m3. NAAQ stipulated standard for NO2 for 24 hr. average is 80 µg/m3.
  - CO is below detection levels, NAAQ stipulated standard for CO for one hour is 4mg/ m3
- The day equivalent noise levels are ranged from 44.2 dB(A) to 52.1 dB(A) and night equivalent noise levels are ranged from 38.2 dB(A) to 42.5 dB(A)
- Most of the parameters of ground water except Hardness (two samples) and Magnesium (One sample) are well within drinking water quality standards as per the IS 10500(2012). The ground water quality in the study area does not indicate any industrial contamination
- A very few surface water sources are there within 10 KM radius of the site. As these water bodies are dried up during study period, surface water sampling could not be done
- Soil types are of Sandy loam soils with neutral to mildly alkaline nature
- None of the plant species recorded either from the core area or Project influence area belongs to the Rare/Endangered/Endemic/ Threatened category. There are no wildlife sanctuaries or biosphere reserves or National Parks, nesting or breeding grounds for any of

the rare species or other protected areas within the core area. Reserve forests of dense scrub and fairy dense scrub are not located within the buffer/study area.

6.3 Socio Economic Conditions

- Socio Economic Impact Assessment of the project extends over 10 km radius from the project site comprising 21 villages. 2 District and 2 taluks
- In the study area, the population is 77,418 of which males are 49.6% and females are 50.4%. The sex ratio of the of the villages is 1002 females over 1000 males. Average literacy of population in the study area is 64.09 %

7.0 Anticipated Environmental Impacts with Mitigation measures

The sources of pollution in the proposed project are Air emissions from induction furnaces, liquid effluents from cooling water and domestic sources, solid waste from process and noise pollution from plant activities and DG sets. The impact assessment report identified various sources of pollution and quantified the pollution loads and has identified the technologies to be adopted for the mitigation and control of the same.

Impacts of air Quality

The additional impacts of air quality due to the proposed project are from the 2 X 12 MT induction furnaces & 2 DG sets of 1 X 250 KVA and 1 x 65 KVA capacity each. The impacts are quantified using ISC- AERMOD model based on ISCST3 Algorithm. The results indicate marginal increase in the ambient air quality parameters and the predicted concentrations are within the prescribed limits of CPCB for 24 hours concentrations.

Table-3.0

Cumulative Concentrations at Various Monitoring locations in 10 KM radius

AAQ Location	Base Line Concentration (µg/m³) *			Predicted GLCs (µg/m³)			Cumulative Concentration (µg/m³)		
	PM10	SO2	NOx	PM10	SO2	NOx	PM10	SO2	NOx
Project Site	79.9	19.4	24.3	1.45	0.938	1.71	81.35	20.338	26.01
Vadavalli	75.5	16.4	20.9	0.677	0.547	1.340	76.177	16.947	22.24
V.Vadugapalayam	69.9	17.2	21.6	0.272	0.221	0.977	70.172	17.421	22.577
Krishnapuram	73.1	17.2	21.8	0.348	0.245	1.013	73.448	17.445	22.813
Puliyamarathupalaiyam	67.9	18.0	22.3	0.158	0.104	0.296	68.058	18.104	22.596
Vadambacheri	70.0	16.2	22.1	0.034	0.064	0.282	70.034	16.264	22.382
Mellakavundanpalaiyam	72.3	17.0	22.9	0.154	0.110	0.250	72.454	17.110	23.15
Sultanpattai	72.7	17.1	21.8	0.336	0.276	0.699	73.036	17.376	22.499

* 98 Percentile values

Note : National Ambient air quality standards for PM 10 – 100 **µg/m³** PM2.5 – 60 **µg/m³** , SOX – 80 **µg/m³** and NOX – 80 **µg/m³**

Impacts on water resources

The daily total fresh water requirement for the plant will be 119 KLD which would be taken from local panchayat. It is proposed to re-use mill and furnace cooling water with primary treatment. Also proposed to establish STP and treated water will be utilised for greenery at the plant site

It is proposed to establish Rain water harvesting structures in the plant with a cost of Rs. 15 lakhs to augment the ground water resources in the area.

Impacts on Noise quality

Noise is anticipated from Furnace, Rolling Mill and DG sets. The DG sets will be kept in separate rooms with acoustic enclosures. The employees working in noise generating areas will be provided with PPE's. Also, tree cover developed at the front side of the plant will act as noise barrier and reduce noise impact outside the factory premises

Impacts on Soil

The solid waste generated from the slag crusher and mill waste can contaminate soil if not handled properly. Adequate safeguards are proposed in the EMP for proper handling and disposal of the waste. 8700 TPA of Slag is generated which is sold to cement brick manufacturers. 1318 TPA of Mill Scale is generated which is sold to paint industries and other secondary users. Waste Scrap (Mis rolls, End Cuttings, CCM Scale) of 4156 TPA will be sold to secondary units as input raw materials.

Impacts on Ecology

There are no endangered flora and fauna in the impact area. Further it is proposed to develop the green belt area of 3.75 hectares in the plant premises. Thus, there will be positive impact on the environment.

Impacts on Socio Economy

The proposed project generates employment of 200 persons in the plant and also generates in-direct employment. As a policy, the management

proposed to give priority to local youth for the recruitment. Further, increased tax collections from the industry will add to Government Exchequer. It is proposed to take up social assistance measures in the nearby villages with an investment of Rs. 26 lakhs

8.0 Environmental Monitoring Program

A well laid out environmental monitoring program is designed for post project monitoring, covering air, water, soil, noise and ground water levels both at project site as well as the nearest village, Kandampalaiyam.

9.0 Additional Studies

9.1 Risk Analysis

Detailed risk analysis study is carried out from proposed activities by considering the hazards identified from operations of induction furnace and rolling mill. Adequate infrastructure to handle emergencies are planned for expansion activities

9.2 Disaster Management

A well laid out disaster management plan is drawn based on the likely risks associated with the plant and operations. Roles and Responsibilities are defined to handle the emergencies under the control of Plant Manager. Communication protocols are defined in case of any emergencies to government agencies and Hospitals. Plant management will participate in any regional mock drills conducted by the District Authorities.

9.3 Traffic and transportation Management

As a part of the base studies, traffic conditions on Pollachi State highway are studied and the total volume of traffic on both directions on this single lane road is 2597.5 PCUs/Day. As per the IRC code 64-1990 Guidelines for capacity of the single lane road in plane area with a gentle slope in low curvature is 6000 PCUs/day. The incremental traffic during construction stage is 30 PCU/day and during the plant operations it is estimated at –

PCU/day. This incremental traffic can be taken by existing road network safely

10.0 Project Benefits

Due to the project, man power of 200 people will get employment directly. Indirect employment opportunities will be generated due to raw materials suppliers, transportation and other service area in the plant. The proposed project activities will generate additional tax revenues to Government exchequer and local body.

10.1 Corporate Environmental Responsibility

As a part of Corporate environmental responsibility, proponents of M/S Meenakshi Steel Re-Rollers proposed to spend about Rs. 26 lakhs over next 5 years period. A tentative plan is prepared and based on the inputs during the public hearing, priorities of villagers will be taken into account and implementation plan will be prepared with the help of District Authorities.

Detailed CER activities are out lined and given below. Based on the inputs from local villages, the plan will be implemented through District authorities.

Table - 4.0

CER Budget

Activity	Year wise Budgets (Rs. Lakhs)					
	1	2	3	4	5	Total
Augmentation Drinking water facilities in Varappatti and Kandampalaiyam	3.0	1.5	0.5	0.5	0.5	6.0
Health Camps in the nearby villages	1.5	1.5	1.5	1.5	1.5	7.5
Contribution to primary school for infrastructure in the nearby villages of Varappatti and Kandampaliaym	1.0	1.0	1.0	-	-	3.0

Contribution for infrastructure development in Primary Health Center at Varappatti	3.0	2.5	-	-	-	5.5
Contributing to Rain water harvesting & Plantation programme in the nearby villages	2.0	1.0	1.0	--	--	4.0
Total	**10.5**	**7.5**	**4.0**	**2.0**	**2.0**	**26.0**

11.0 Environmental Management Plan

The management plan is drawn in consultation with the project proponents, technical consultants after evaluating a number of technologies available for mitigation and control of pollution.

The environmental management plan is drawn to address the impact identified during construction which is temporary and the impacts identified during operation stages & remedial measures are incorporated in EMP

Budget for implementation of EMP

A total of Rs. 1.0 Crores is proposed for implementation of Environmental Management Program. A recurring expenditure of Rs. 32.62 lakhs/annum is earmarked for implementation cost of EMP including waste handling, disposal, environmental monitoring, green belt development, storm water management etc as detailed below

Table - 5.0

EMP Budget

S.No	Description	Capital Cost in Rs. Lakhs	Recurring Cost in Rs. Lakhs/Annum
1	Air Pollution Control For two induction furnaces with primary and secondary ductings	35.0	15.0

2	Water Pollution Control Primary treatment plant of mill cooling water, Construction of STP	15.0	4.0
3	Storm Water management & Rain water harvesting structures	15.0	1.0
4	Solid Waste Management & dust prevention measures	4.0	1.0
5	Solar lighting in open areas	1.5	1.0
5	Noise Pollution Control	2.0	1.0
6	Environmental Monitoring & Management	-	2.62
7	Occupational health & Safety	5.0	2.0
8	Fire Safety	15.0	2.0
9	Green belt & open area development*	7.5	3.0
Total		**100.0**	**32.62**