

<b>Project</b>	<b>: Proposed MS Billets/Ingots and TMT Bar/Structural Items/Pipes, Jaipur</b>
<b>Promoter</b>	<b>: Mangala Product Private Limited</b>

## Executive Summary – English



<b>Gaurang Environmental Solutions Pvt. Ltd</b>	
<b>Report No: : GESPL_524/2022-23/DRAFT EIA/264</b>	<b>Rev No. 01</b>



## PROJECT SUMMARY

### 1.1 INTRODUCTION

Mangala Product Private Limited is a proposed MS Billets/Ingots to the tune of 2,37,600 TPA and TMT Bar/Structural Items/Pipes to the tune of 2,97,000 TPA manufacturing unit, which is coming up at Plot No. SP-187 to 189 (A) and SP-187-189 (B), RIICO Industrial Area, Bagru Extn. Phase-II, Bagru, Jaipur (Rajasthan). The proposed unit will install Induction Furnace along with Continuous Casting Machine (CCM) and Reheating Furnace. Inhouse MS Billets/Ingots will be used for production of TMT Bar/Structural Items/Pipes. The total cost of proposed project will be Rs 45.0 Crores.

The project activity is listed at category-'B' under item 3(a)-Metallurgical industries (ferrous& non-ferrous) in column 5 point (ii) In case of secondary metallurgical processing industrial units, those projects involving operation of furnaces only such as induction and electrical arc furnace, submerged arc furnace, and cupola with capacity more than 30,000 tonnes per annum (TPA) would require environmental clearance as per the EIA Notification dated 14th September' 2006 and its subsequent amendments.

**Table 1.1 Details of Environmental Setting**

S. No.	Particulars	Details		
1	Location			
A	Plot No.	Plot No. SP-187 to 189 (A) and SP-187-189 (B), RIICO Industrial Area, Bagru Extn. Phase-II		
B	Tehsil	Bagru		
C	District	Jaipur		
D	State	Rajasthan		
E	Latitude	26°48'32.09"N		
F	Longitude	75°34'40.44"E		
H	Total Plant Area	27,700 sq.m		
2.	Nearest habitation	Bagru: 3.2 km, W		
3.	Nearest Major town	Jaipur: 22.8 km, ENE		
4.	Nearest Highway	Particulars	Distance	Direction
		NH-48	2.5	NW
		MDR 81	3.7	WSW
		NH11C	3.5	W
5.	Nearest Railway Station	Particulars	Distance	Direction





	from Project site	Sheo Singh Pura Railway Station	11.8	N	
		Jaipur Junction	24.3	NE	
6.	Airport	Jaipur International Airport ~23.1 km in ENE direction.			
7.	Defence installations	None within study area			
8.	Archaeological important	None within study area			
9.	Ecological sensitive zones	None within study area			
10.	Reserved/Protected forest/National Parks/Wildlife Sanctuary (from Project Site)	List of RF/PF/Wildlife Sanctuary, National Park, Elephant Corridor, Tiger Reserve are as under:			
		<b>S. No.</b>	<b>Particulars</b>	<b>Distance (Km)</b>	<b>Direction</b>
				<b>(From Project Boundary)</b>	
		<b>RF</b>			
		1.	Muhana R.F.	12.5	ESE
11.	Nearest streams / Rivers / water bodies (from Project Site)	<b>S. No.</b>	<b>Particulars</b>	<b>Distance (Km) &amp; Direction</b>	
				<b>(From Project Boundary)</b>	
		<b>Water Bodies</b>			
		1.	Sadriya Nadi	0.4, S	
		2.	Nevata Talav	10.1, E	
		3.	Bandi River	11.9, SSW	
		4.	Hingoniya Sagar	11.3, WSW	
		<i>*Source: - All Distances are taken with respect to Toposheet.</i>			
12.	Seismic zone	The site is located in the Seismic Zone II, as per the seismic zoning map of India given in BIS code IS: 1893 (Part1)-2002, which is Low Damage Risk Zone.			

## 1.2 DESCRIPTION OF THE PROJECT

The salient features of the proposed plant are given below:

**Table 1.2 SALIENT FEATURES OF PROJECT**

S. No.	Particulars	Details
1.	Project Name	Proposed MS Billets/Ingots to the tune of 2,37,600 TPA and TMT Bar/Structural Items/Pipes to the tune of 2,97,000 TPA
2.	Location	Plot No. SP-187 to 189 (A) and SP-187-189 (B), RIICO Industrial Area, Bagru Extn. Phase-II, Bagru, Jaipur (Rajasthan)





**Project: Proposed MS Billets/Ingots and TMT Bar/Structural Items/Pipes, Jaipur****Promoter: Mangala Product Private Limited****Project Summary**

3.	Production & its Capacity	<b>S. No.</b>		<b>Name of Products</b>	<b>Production Capacity (TPA)</b>	
		1	<b>M.S. Billets/Ingots</b>		2,37,600	
			Induction Furnace (Capacity and Numbers)		30 TPH – 2 nos (15 TPH x 1 and 15 TPH x 1)	
		2	<b>TMT Bar/Structural Items/Pipes</b>		2,97,000	
Reheating Furnace (Capacity and Numbers)			45 TPH – 1 no			
4.	Land requirement	27,700 sq m.				
5.	Source of power	JVVNL				
6.	Water Requirement	<b>S. No.</b>	<b>Water Consumption</b>	<b>Total (KLD)</b>		
		1.	Domestic	14.0		
		2.	Gardening	10.0 (Recycled water from STP)		
		3.	Industrial Process (Cooling and quenching purposes)	300.0		
		<b>Total</b>		<b>314</b>		
		<b>Fresh Water demand</b>		<b>44.0</b>		
		<b>Recycled water</b>		<b>270.0</b>		
7.	Source of Water	Ground Water Supply				
8.	Manpower	<b>S. No.</b>	<b>Particulars</b>	<b>Total</b>		
		1	During Construction Phase	25		
		2	During Operation Phase	300		
9.	Wastewater generation	11.0 KLD of domestic waste water will be genarted which will be treated in STP of capacity 15 KLD. Industrial waste water : Nil				
10.	Solid waste generation	<b>Solid Waste Generation</b>				
		<b>S. No.</b>	<b>Particulars</b>	<b>Unit</b>	<b>Quantity</b>	<b>Mode of Disposal</b>
		1.	Domestic solid waste	Kg/day	45	disposed off solid waste dump sites
		2	Slag	T/day	44	Used for road filling
		3	Coal ash	Kg/day	4	Used for road filling
		<b>Hazardous Waste</b>				
		<b>Particulars</b>		<b>Category</b>	<b>Total Quantity</b>	<b>Management</b>
		Used/ Spent oil		5.1	0.01 KL/year	will be sold to register users

**Gaurang Environmental Solutions Pvt. Ltd.****Page****Report Ref: GESPL\_524/2022-23/DRAFT EIA/264****Rev No. 01**



<b>Project: Proposed MS Billets/Ingots and TMT Bar/Structural Items/Pipes, Jaipur</b>	
<b>Promoter: Mangala Product Private Limited</b>	<b>Project Summary</b>

11.	Project Cost	Total : Rs. 45.0 Cr.
12.	EMP costs	The total recurring cost towards EMP is Rs. 17.5 lac. and the capital cost will be Rs. 168.5 lac.
13.	Social Enterprise budget	Rs 9.0 lac

### 1.3 ENVIRONMENTAL MONITORING

For monitoring of the environmental parameters like meteorology, air, water, soil and noise quality, the monitoring stations have been established at different locations in and around the project area. The base line data has been collected in the post-monsoon season from October, November and December'2022.

#### Ambient Air Quality

Ambient air quality monitoring has been carried out with a frequency of two days per week at nine locations. The summary of these results for all the locations is presented below. These are compared with the standards prescribed by Central Pollution Control Board (CPCB) for rural and residential zone.

**Table No.1.3 Summary of Ambient Air Quality for all the locations**

S. No.	Sampling Location		Parameters				
			PM <sub>10</sub> ( $\mu\text{g}/\text{m}^3$ )	PM <sub>2.5</sub> ( $\mu\text{g}/\text{m}^3$ )	SO <sub>2</sub> ( $\mu\text{g}/\text{m}^3$ )	NO <sub>x</sub> ( $\mu\text{g}/\text{m}^3$ )	CO ( $\mu\text{g}/\text{m}^3$ )
1.	Project Site	Min	64.58	38.32	4.82	9.23	0.47
		Max	90.58	58.13	9.81	18.15	0.61
		Avg.	74.98	47.39	7.70	14.64	0.53
		98 <sup>th</sup> % ile	89.92	57.93	9.78	18.13	0.60
2.	Tilas	Min	65.04	35.67	4.31	9.18	0.45
		Max	89.12	57.45	9.76	17.68	0.59
		Avg.	73.96	45.56	7.82	14.56	0.52
		98 <sup>th</sup> % ile	87.69	57.36	9.75	17.42	0.59
3.	Dhami Khurd	Min	65.08	26.62	8.19	12.57	0.49
		Max	81.75	39.98	12.72	19.63	1.72
		Avg.	73.20	31.41	10.23	15.59	0.84
		98 <sup>th</sup> % ile	80.43	39.95	12.53	19.08	1.56
4.	Gegha	Min	72.84	40.16	14.25	16.13	0.8
		Max	84.16	52.19	21.14	23.8	0.98
		Avg.	76.86	46.35	17.54	20.22	0.90
		98 <sup>th</sup> % ile	82.83	51.71	21.08	23.75	0.98
5.	Sampara	Min	70.63	41.52	10.03	16.88	0.73



6.	Palri	Max	78.21	48.38	13.63	22.24	0.92
		Avg.	74.12	44.35	12.55	19.09	0.82
		98 <sup>th</sup> % ile	77.75	47.89	13.55	21.77	0.91
		Min	66.72	34.52	7.46	12.97	0.47
7.	Lokhonda	Max	87.3	49.38	13.45	18.63	1.82
		Avg.	76.64	40.41	10.52	15.50	0.91
		98 <sup>th</sup> % ile	85.85	48.98	13.41	18.19	1.55
		Min	63.59	38.69	5.35	10.75	0.46
8.	Bagru	Max	88.34	53.81	8.74	15.98	0.66
		Avg.	74.99	47.90	7.02	13.38	0.55
		98 <sup>th</sup> % ile	87.73	53.63	8.63	15.95	0.65
		Min	56.05	31.00	7.9	14.31	0.89
9.	Within the Industrial Area	Max	78.90	42.36	10.69	17.03	1.11
		Avg.	66.95	36.62	9.30	15.82	1.02
		98 <sup>th</sup> % ile	78.87	42.35	10.67	16.99	1.11
		Min	69.48	42.35	7.3	14.2	0.45
NAAQ STANDARDS		Max	94.7	56.09	11.3	19.7	1.62
		Avg.	87.20	51.05	9.68	16.84	0.80
		98 <sup>th</sup> % ile	94.63	55.94	11.25	19.47	1.59
		Min	100	60	80	80	02

**Note: All values are represented in  $\mu\text{g}/\text{m}^3$**

All values were found to be well within the latest national standards.

#### Ground water quality

Nine groundwater samples were collected as grab samples and were analyzed for various parameters. The result indicates that the ground water quality values are below the permissible limits and is suitable for drinking purpose. However, the same shall be suitably pre-treated before Drinking. As per IS 10500.

#### Noise Quality

The noise monitoring has been conducted for determination of noise levels at nine locations covering 10 km study area. The noise levels at each location were recorded for 24-hrs. The results obtained were compared with the national standards and were found to be within limits

#### Ecology

The project site is already surrounded by the urban environment and does not hold any





critical habitat/ecosystem as well as any threatened floral or faunal species. So project site will not have any adverse impact on the environment.

## 1.4 ANTICIPATED ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

The summary of anticipated adverse environmental impacts due to the proposed project and mitigation measures are given below.

### 1.4.1 Air Environment

PUC certified vehicles will be used. To minimize & control the emission from induction furnace exhaust gases after suction hood will be passed through spark arrester along with bag house before its discharge to atmosphere through stack (30 m). From Re-Heating Furnace, gases passed through gravity chamber, multi cyclone and bag house before its discharge to atmosphere through stack (30 m). The flue gas outlet will be designed to maintain the PM emission level below 30 mg/Nm<sup>3</sup>. DG sets will be fitted with adequate stack (10 m from ground level) to take care of particulate & gaseous emission. All roads shall be paved on which movement of raw materials or products will take place. Coal/LSHS will be stored in covered designated storage area.





**1.4.2 Water Environment****Domestic Waste water**

Approximately 11.0 KLD Domestic wastewater will be generated from proposed unit, which will be treated into STP based on Automatic Control Airlift Crossflow MBR technology (15 KLD). Treated water from STP will be reused in greenbelt/plantation purposes. Sludge will be generated and utilized as manure for greenbelt development/plantation within the plant premises.

**Industrial Waste Water**

There will be no industrial effluent generation, as the water from cooling will be recycled. Hence, there will be no any discharge of wastewater outside the company premises; Thus, the unit will achieving ZLD.

**1.4.3 Noise Environment**

33% of total project area will be under green cover. Earmuffs/earplugs will be provided to all the workers deployed at high noise generating sources. Acoustically insulated cubicles will be provided to operators working near high noise generation sources. Effective preventive maintenance and vibration measurement of all rotating equipments will be done which will help in improvising the plant life and reduce the noise.

**1.4.4 Socio-Economic Environment**

The requirement of unskilled manpower will be met from nearby villages during construction and operational phase through training and development. The project will also help in generation of the indirect employment apart from direct employment. This will be a positive socio-economic development for the region. There will be a general upliftment of standard of living in the region.

**1.4.5 Solid Waste Generation & Disposal****Solid Waste Generation**

S. No.	Particulars	Unit	Quantity	Mode of Disposal
1.	Domestic solid waste	Kg/day	45	disposed off solid waste dump sites





2	Slag	T/day	44	Used for road filling
3	Coal ash	Kg/day	4	Used for road filling

**Hazardous Waste**

Particulars	Category	Total Quantity	Management
Used/ Spent oil	5.1	0.01 KL/year	will be sold to register users

**1.5 ENVIRONMENTAL MONITORING PROGRAMME****Environmental Monitoring Cell**

A centralized environmental monitoring cell will be established for monitoring of important and crucial environmental parameters which are of immense importance to assess the status of environment during MS ingots/Billets and rolling mill operation. The following routine monitoring programme as detailed in as undershall be implemented at site. Besides to this monitoring, the compliances to all environmental clearance conditions and regular permits from RSPCB/MoEF shall be monitored and reported periodically.

**1.6 ENVIRONMENTAL ACTION PROGRAMME**

Mangala Product Private Limited is quite conscious of its responsibility for maintaining clean and a healthy environment. The total recurring cost towards EMP is Rs. 17.5 lac. and the capital cost will be Rs. 168.5 lac. The annual expenditure to be incurred on plantation, maintenance, monitoring and analysis of ambient air, effluent water and soil etc as shown in Table below:

**Table 1.5: Annual Expenditure of Environmental Protection Measures**

S. No.	Description of Item	Total (Rs. In Laacs)	
		Capital Cost	Recurring Cost
1	Air Pollution Control Equipment (Gravity chamber, Multi cyclone, Bag house, Spark arrester,	50.0	5.0





	stack)		
2.	Rain water Harvesting Structure	10.0	1.0
3.	Water Pollution Control (Installation of Automatic Control Airlift Crossflow MBR technology STP)	5.0	1.0
4.	Environmental Monitoring and Management	--	5.0
5.	Green Belt Development	46.0	5.0
6.	Occupational Health & Safety	3.50	0.50
7.	Social-EMP	9.0	--
8.	Conservation plan-Indian peafowl	45.0	--
<b>Total</b>		<b>168.5</b>	<b>17.5</b>

## 1.7 PROJECT BENEFITS

The PP proposes the following permanent structures within a 10.0 km periphery of the project. On the basis of the preliminary site visit, the proposed infrastructures are as follows:

- ✓ The proposed project aims to provide health camps and access treatment programmes
- ✓ Facility for village schools including classroom/toilet construction, ceiling fans/coolers or books for school library.
- ✓ There will be social benefits from the proposed rolling mill project.

The underlying benefits through the proposed project are:

- ✓ The proposed project will contribute to gains in national employment and in the gross domestic product.
- ✓ The organization will establish, implement & maintain Occupational health & safety objectives as per norms, at relevant functions & levels within the organization.

## 1.8 ENVIRONMENT MANAGEMENT PLAN DURING OPERATION PHASE



Table 1.6 Environment Management Plan

Particulars	Mitigation Measures				
Air Environment	<ul style="list-style-type: none"><li>Storage of coal/LSHS in covered area.</li><li>Regular post project air monitoring schedule will be planned and record will be maintained.</li><li>PUC certified vehicles will be used.</li><li>The flue gas outlet will be designed to maintain the PM emission level below 30 mg/Nm<sup>3</sup>.</li></ul>				
Water Environment	<ul style="list-style-type: none"><li>Domestic Waste water will be treated in STP.</li><li>Rain water harvesting structure (2 nos.) will be installed in the unit.</li></ul>				
Solid Waste	Solid Waste Generation				
	S. No.	Particulars	Unit	Quantity	Mode of Disposal
	1.	Domestic solid waste	Kg/day	45	disposed off solid waste dump sites
	2	Slag	T/day	44	Used for road filling
	3	Coal ash	Kg/day	4	Used for road filling
	Hazardous Waste				
	Particulars		Category	Total Quantity	Management
	Used/ Spent oil		5.1	0.01 KL/year	will be sold to register users
Noise Pollution	<ul style="list-style-type: none"><li>33% of total project area will be under green cover.</li><li>Acoustic dampeners and insulators will be provided in the foundation and interiors respectively.</li><li>Earmuffs/earplugs will be provided to all the workers deployed at high noise generating sources. Acoustically insulated cubicles will be provided to operators working near high noise generation sources.</li><li>Effective preventive maintenance and vibration measurement of all rotating equipment's will be done which will help in improvising the plant life and reduce the noise.</li></ul>				





## 1.9 CONCLUSIONS

It is predicted that socio-economic impact due to this project will positively increase the employment opportunities for local inhabitants. There are no resettlement and rehabilitation issues involved in this project. The project infrastructures will be of use to people of the area. The contribution to the revenue of the State Govt. will be put in public welfare and augment growth. The entire project area is devoid of any endangered flora and fauna. Thus the proposed project is not likely to affect the environment or adjacent ecosystem adversely.

\*\*\*\*\*

