

Executive Summary
of
Environmental Impact Assessment
For
M/s. Bhagyalaxmi Rolling Mills Pvt. Ltd.,

**Expansion in Production of MS Billets -750 TPD to 2000 TPD,
And Environmental Clearance for Rolling Mills for Manufacturing
of TMT Bars - 2000 TPD.**

At
**Plot No.: G:7, G:7 Part, G-8, G:9, G:10/1, G:10/2 & G:11, Additional
MIDC Phase II, (MIDC) Jalna, Tal. & Dist.: Jalna, Maharashtra .**



Project Proponent:

M/s. Bhagyalaxmi Rolling Mills Pvt. Ltd.,

**Plot No.: G:7, G:7 Part, G-8, G:9, G:10/1, G:10/2 & G:11, Additional MIDC
Phase II, (MIDC) Jalna, Tal. & Dist.: Jalna, Maharashtra .**

Consultant



**Sri Sai Manasa Nature Tech Private
Limited,**

(Certificate No. NABET/EIA/1821/SA 0122, Validity: 20-05-2022)

April, 2022

EXECUTIVE SUMMARY

1.0 Introduction

Environmental Impact Assessment (EIA) is a process, used to identify the environmental, social and economic impacts of a project prior to decision-making. It is a decision-making tool, which guides the decision makers in taking appropriate decisions for proposed expansion projects. EIA systematically examines both beneficial and adverse consequences of the expansion project and ensure that these impacts are taken into account during the project designing.

1.1 Environmental Clearance

As per the Environmental Impact Assessment (EIA); Notification S.O. 1533, 14-09-2006 issued by MoEFCC, Government of India, the MS Billets Manufacturing Unit is categorized as Category- B project, which mandates obtaining prior Environmental Clearance from Ministry of Environment, Forest and Climate Change.

1.2 Terms of Reference

M/s. Bhagyalaxmi Rolling Mills Pvt. Ltd. has submitted the application for prior Environmental Clearance as per the new notification along with prescribed Form-1, proposed Terms of Reference for EIA study and pre-Feasibility report. The State Environmental Impact Assessment Authority considered the project and issued the Terms of Reference and prescribed Terms of References is incorporated in the EIA report.

1.3 Brief Description of Project

The project is an expansion project of MS Billets from 750 TPD to 2000 TPD and Environmental Clearance for Rolling Mills for manufacturing of TMT Bars - 2000 TPD at Plot No: G:7, G:7 Part, G-8, G:9, G:10/1, G:10/2 & G:11, Additional MIDC Phase II, Jalna. Maharashtra Industrial Development Corporation (MIDC) Jalna, Taluka-Jalna, District-Jalna, Maharashtra State. Total available Land with BRMPL is 118033 Sq. m. The project location map is given in **Figure 1**, Project Layout Map is given in **Figure 2**, 10 km study area map is given in **Figure 3** and Google image of the project is given in **Figure 4**. The production details are given in **Table 1**.

Table 1: Product Details

Production Capacity			
Product	Existing	Proposed	Total
MS Billets	750 TPD	1250 TPD	2000 TPD
TMT Bar (Rolling Mill)	2000 TPD		2000 TPD

Project Proponents

M/s. Bhagalaxmi Rolling Mills Private Limited here in after referred to as BRMPL was incorporated in the year 2004. This group has its first unit, i.e., M/s. Bhagalaxmi Rolling Mills Private Limited, at Plot No.: G:7, G:7 Part, G-8, G:9, G:10/1, G:10/2 & G:11 Additional MIDC Phase II, Jalna, from the year 2004, with an installed capacity of 750 MTD of MS Billets. Production at this unit commenced in the year 2014-2015. Amongst the ten steel plants in Jalna District this was the first plant to manufacture Billets in place of ingots.

As the industry upgrade company also practices with newest technology like Quenching & self-tempering technology, Latest introduction is the Con-Cast Technology and Hot Roll Process for the better-quality product.

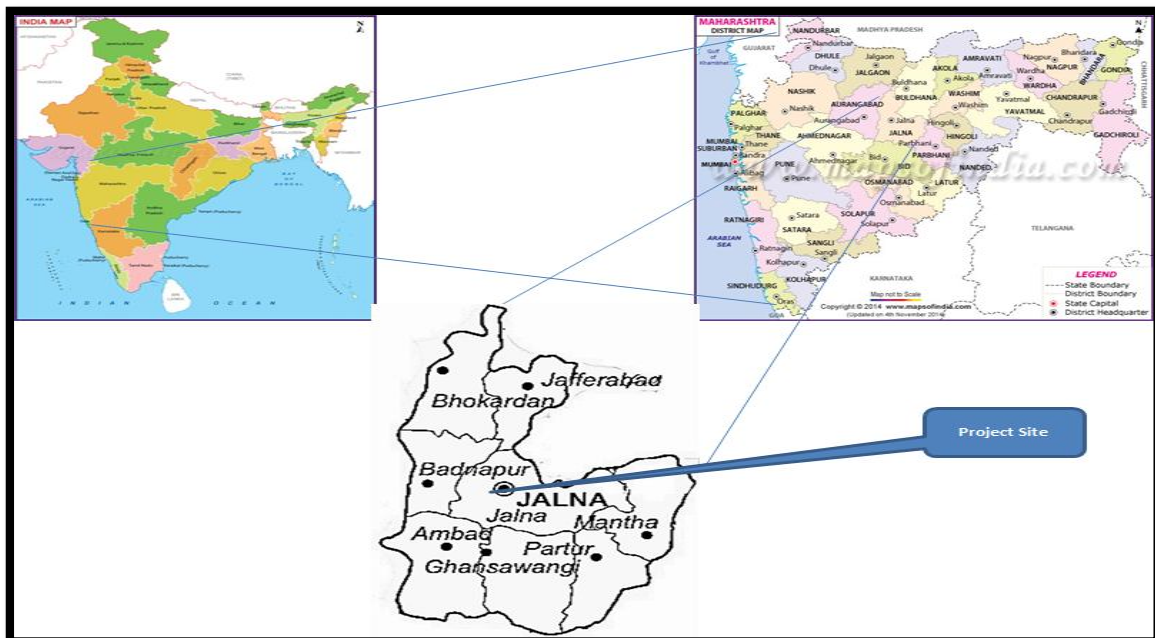


Figure 1: Project Location Map

Executive Summary for Proposed Expansion in Production of M S Billets -750 TPD to 2000 TPD and Environmental Clearance for Rolling Mills for manufacturing of TMT Bars - 2000 TPD at Plot No.: G:7, G:7 Part, G-8, G:9, G:10/1, G:10/2, G:11, Additional MIDC Phase II, Jalna, Tal. & Dist.: Jalna, Maharashtra by M/s. Bhagalaxmi Rolling Mills Pvt. Ltd.

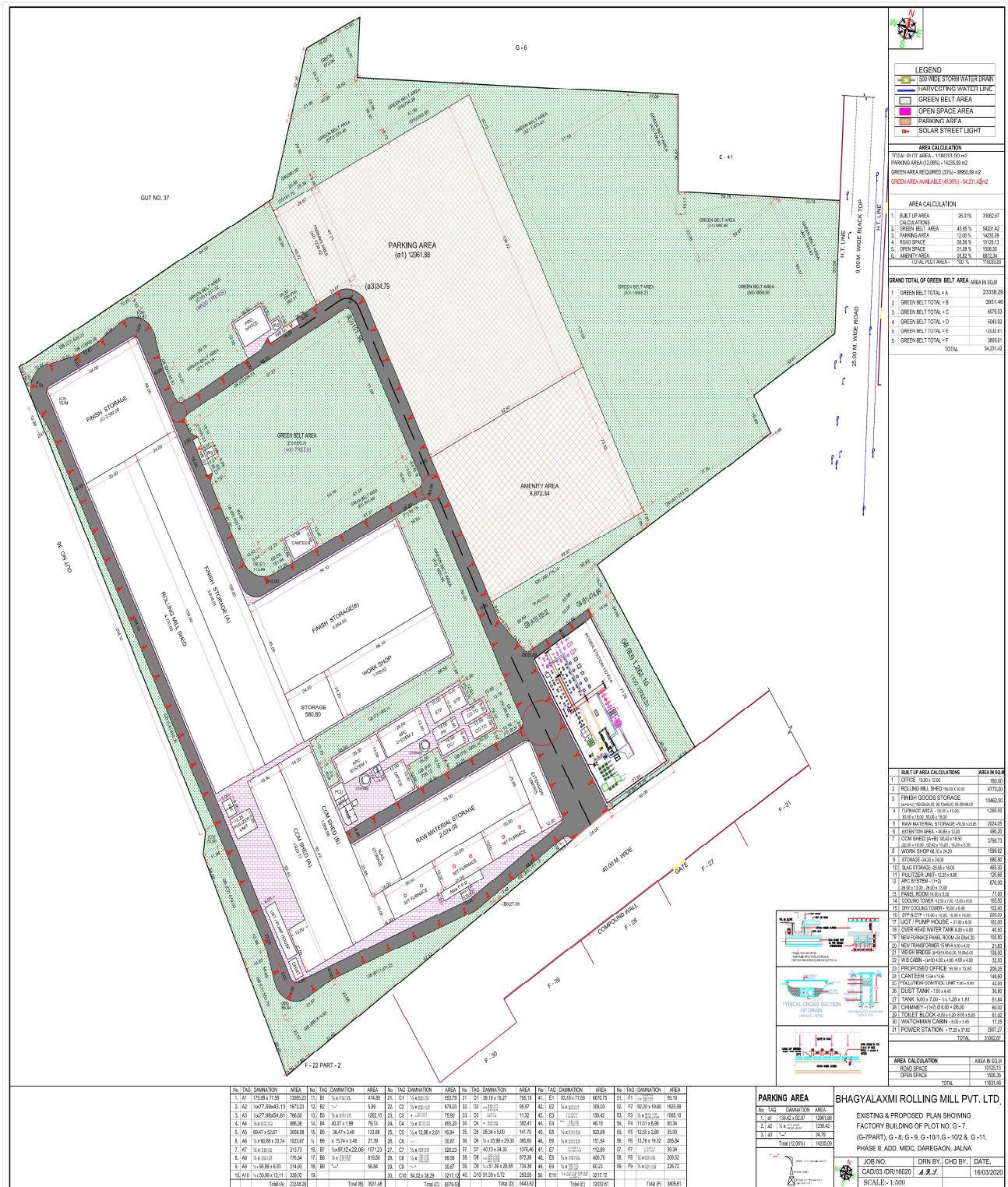


Figure 2: Project Layout Map

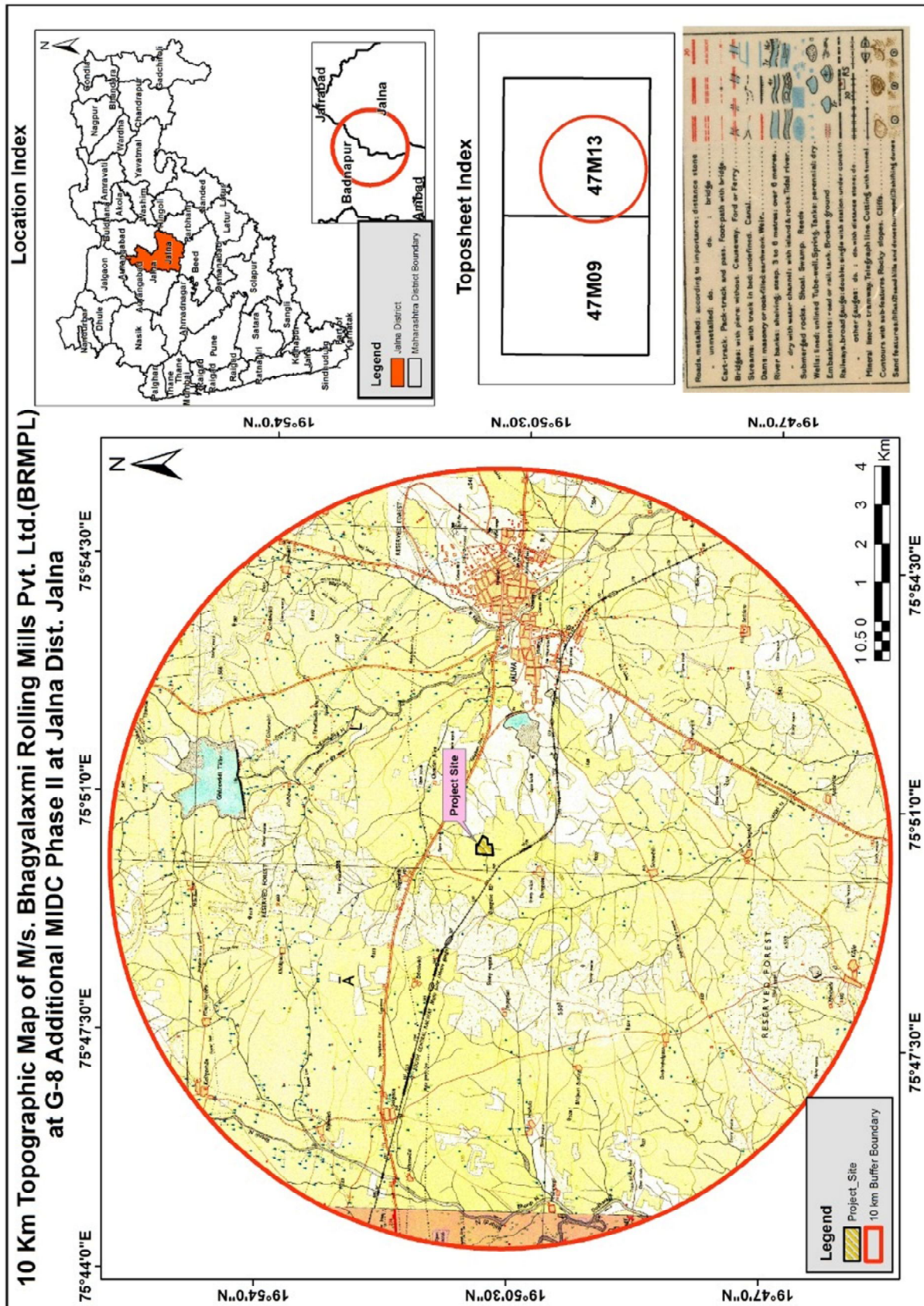


Figure 3: 10 km Topographic Study Area Map of the Project Site



Figure 4: Google Image of the Project Site

2.0 Project Description

2.1 Raw Material Requirement

The major raw materials for the proposed expansion project are Sponge Iron, MS scrap, Ferro Manganese, Ferro Silicon, coke, coal, dolomite and other minerals. The raw material requirement per day is given in **Table 2**.

Table 2 (A): Raw Material Characteristics (MS Billets Manufacturing)

S. N.	Particular	Existing Quantity (MTD)	Proposed Quantity (MTD)	Total Quantity (MTD)	Source	Mode of Transportation
1	Scrap	450	750	1200	Open Market	By road
2	Sponge Iron	300	500	800	Open Market	By road
3	Other Minerals	30	50	80	Open Market	By road
Total		780	1300	2080		

Table 2 (B): Raw Material Characteristics (TMT bar Manufacturing)

S. N.	Particular	Existing Quantity (TPD)	Proposed Quantity (TPD)	Total Quantity (TPD)	Source
1	MS-Billets	2000	0.00	2000	In-house

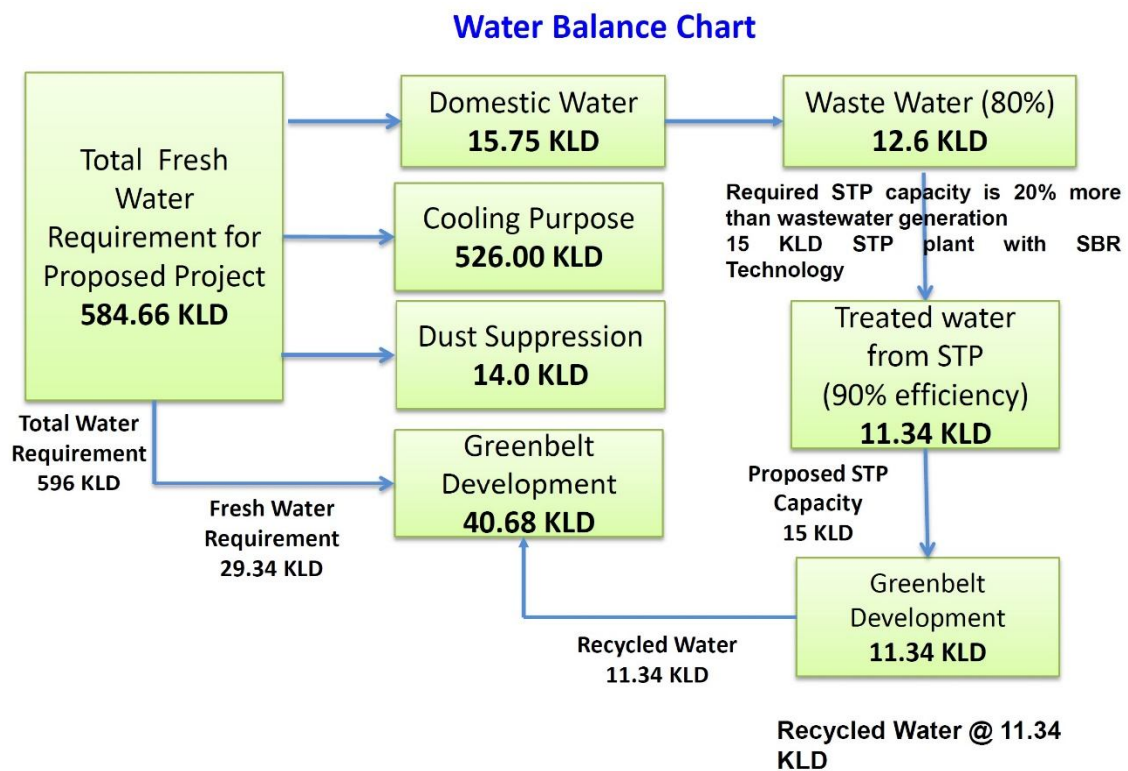
2.2 Water Requirement

The manufacturing process of proposed project require water only for cooling purpose. Existing water requirement of the project is 393.73 KLD & water requirements for proposed expansion activity will be 202.70 KLD. Water requirement in the project will be for cooling purpose, domestic consumption, green belt development and dust suppression activities. Total water requirement for the project including existing and proposed expansion will be 596.00 KLD. This requirement will be met from own reservoir & MIDC. Total requirement of water for domestic purpose will be 15.75 KLD from which 12.6 KLD wastewater will be generated. Generated waste water will be treated in STP and reused & recycled for greenbelt and landscaping development in the proposed project activity. Total fresh water requirement for the proposed project will be 584.66 KLD. The details of water requirement for different purposes are presented in **Table 3**. Water Balance Diagram for the proposed expansion project activity is shown in below **Figure 5**.

Table 3: Water Requirement

S. N.	Item	Existing (KLD)	Proposed (KLD)	Total (KLD)
1	Domestic Purpose	8.55	7.20	15.75
2	Cooling Purpose	348.00	178.00	526.00
3	Green Belt	29.18	11.50	40.68
4	Dust Suppression	8.00	6.00	14.00
	Total	393.73	202.70	596.43
Total Water Requirement (Rounded Off)				596

* All values in KLD



Total Water Requirement = 596 KLD

Fresh Water = 584.66 KLD & Recycled Water = 11.34 KLD

Figure 5: Water Balance Diagram

2.3 Land Requirement

BRMPL has having total 1,18,033 Sq. m. of land for proposed expansion project. The proposed expansion activity will be established within own industrial premises only. The land breakup details are presented in **Table 4**. Green belt will be developed in 33% area which is being 38950.67 sq. m.

Table 4: Land Break-up Details

S. N.	Particulars	Land Area in Sq. m	Land Area in Percentage (%)
1	Built up Area	31062.67	26.31
2	Green Belt Area	38950.89	33.00
3	Parking Area	14235.09	12.06
4	Road Area	10125.13	8.58
5	Amenity Area	6872.34	5.82
6	Open Area	1506.35	1.28
7	Reserve Area	15285.27	12.94
	Total	118033.00	100.00

2.4 Power Requirement

The total power requirement after expansion will be 50 MW. The power will be sourced from the Maharashtra State Electricity Board. The details of Existing and proposed power requirement are given in **Table 5**.

Table 5: Power Requirement

S. N.	Particular	Quantity	Source
1	Existing	19.0 MW	MSPDCL
2	Proposed	31.0 MW	
	Total	50.0 MW	

2.5 Man Power Requirement

The skilled/semiskilled/unskilled manpower required for the proposed project. The man power requirement will be fulfilled from the surrounding villages, to help for the improvement of the socio-economic status in the surrounding rural areas. The details of employment are given in **Table 6**.

Table 6: Man Power Requirement

S. N.	Particular	Numbers
1	Existing	190
2	Proposed	160
	Total	350

2.6 Technology and Process Description

The induction furnace operates as a batch melting process producing batches of molten steel known "heats". The furnace operating cycle is called the tap-to-tap cycle and is made up of the following operations:

- Furnace charging
- Melting
- Refining
- De-slagging
- Tapping
- Furnace turn-around

The process flow diagram is **Figure 6**. The production quantities and furnace details are given in **Table 7**.

Table 7: Furnace & Billets Production Details

Furnace and Billets production details	Existing furnace (billets): 30 MT X 13 Heats=390 MTD 30 MT X 12 Heats = 360 MTD. Total: 750 MTD	Proposed Modification (billets). (1Heat ±) 30 MT X 18 Heats = 540 MTD 30 MT X 17 Heats = 510 MTD 60 MT X 16 Heats = 960 TPD 1Heats± Burning loss & Slag generation Total: 2000 MTD

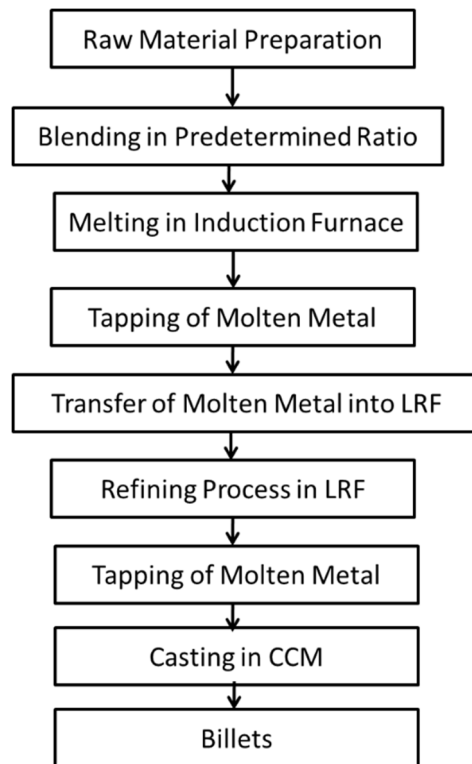


Figure 6 (A): Manufacturing Process (Billets Manufacturing)

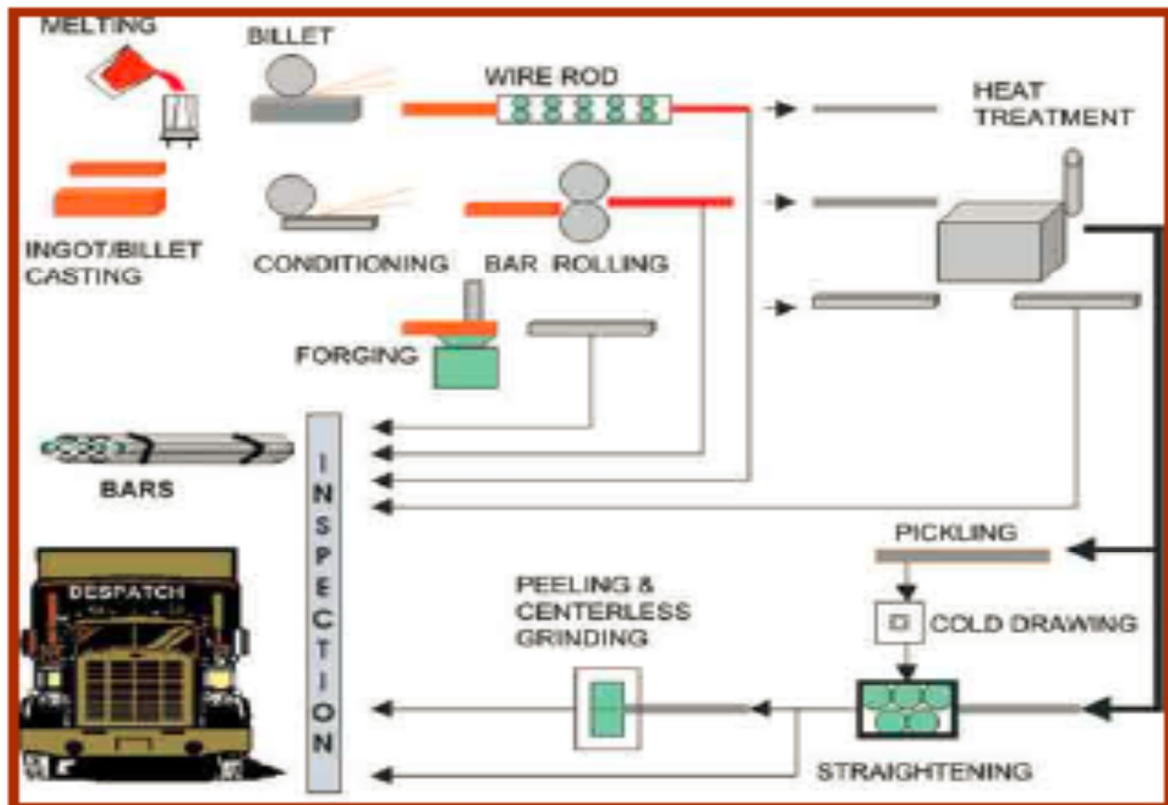


Figure 6 (B): Manufacturing Process (TMT Bar)

3.0 Baseline Environmental Studies

Baseline environmental studies were conducted in the area within 10 km radius from the proposed expansion project site to assess the existing environmental scenario in the area. The baseline environmental quality data for various components of environment, viz. Air, Noise, Water, Land were monitored during December 2021 to February 2022 in the study area covering 10 km radius around the Plant area.

3.1 Meteorology

3.1.1 Summary of the Meteorological Data Generated at Site

The site-specific meteorological data is given in **Table 8** and wind rose diagram is given in **Figure 7**.

Table 8: Site Specific Climatological Data

Month	Temperature (°C)		Relative Humidity (%)		Rainfall (mm)
	Min	Max	Min	Max	
December 2021	15.5	29.0	47	65	10.5
January 2022	14.8	28.6	48	67	3.0
February 2022	17.4	30.8	37	64	2.5
Total					16.0

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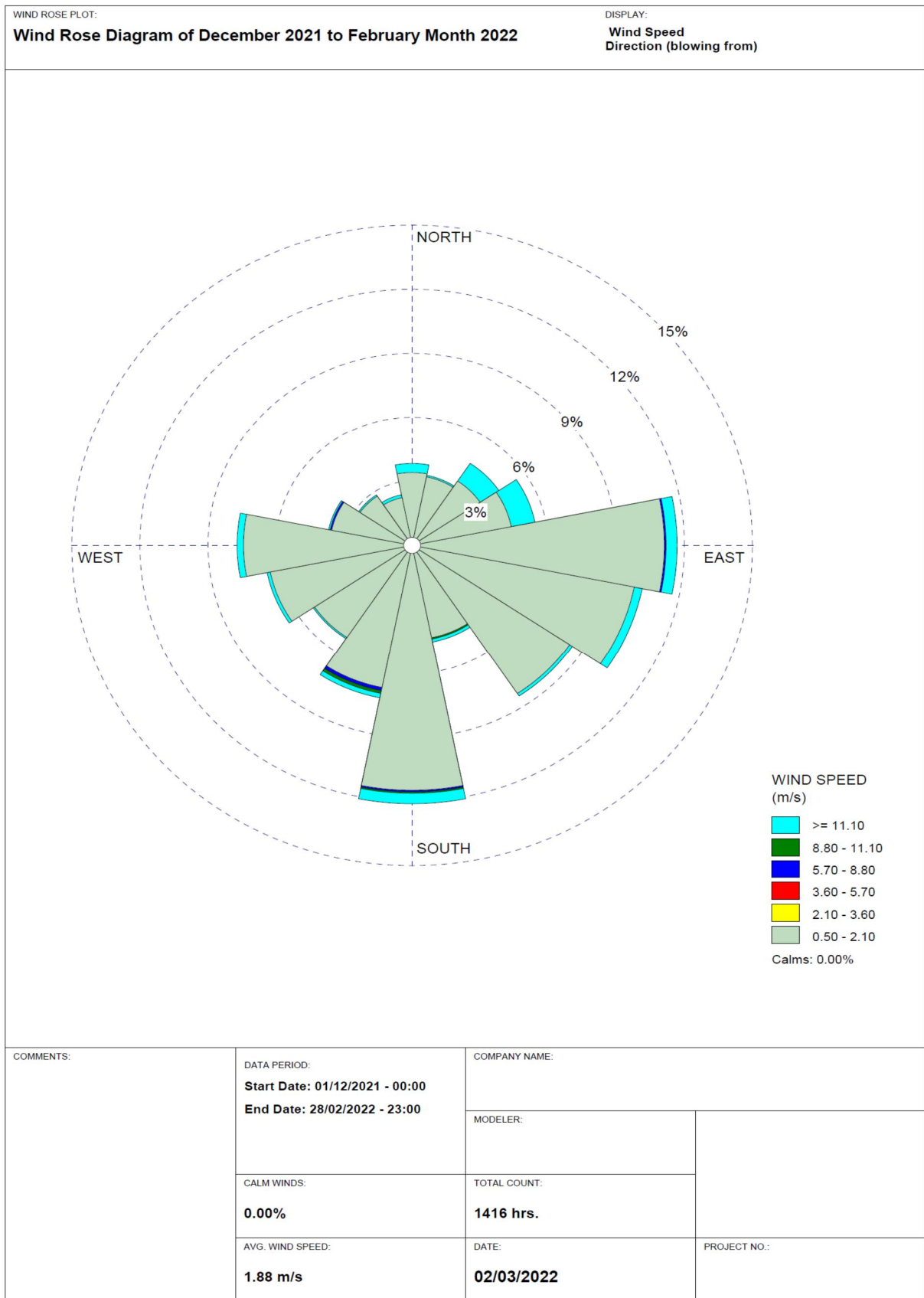


Figure 7: Wind Rose Diagram – December 2021 to February 2022 (IMD Specific)

3.2 Ambient Air Quality Status

The status of ambient air quality within the study area was monitored for the period of during December 2021 to February 2022 at 8 locations including the Plant area and in nearby villages. Total 8 sampling locations were selected based on the meteorological conditions considering upwind and downwind directions. The levels of Respirable Particulate Matter (PM₁₀), Fine Particulates (PM_{2.5}), Sulphur Dioxide (SO₂) and Oxides of Nitrogen (NO_x) were monitored. Based on the above, the AAQ stations have been identified and locations of ambient air quality stations are presented in **Table 9**. The minimum and maximum values of monitoring results are summarized in **Table 10**.

Table 9: Ambient Air Quality Monitoring Stations

Code	Sampling Location	Distance w.r.to Project Site (km)	Direction w.r.to Project Site
A-1	Project Site	-	-
A-2	Daregaon Village	1.0 km	S
A-3	Javasgaon Village	4.0 km	W
A-4	Dhawalwadi Village	4.0 km	NW
A-5	Nagewadi Village	2.0 km	N
A-6	Nidhana Village	4.5 km	S
A-7	Chandanjhira Village	1.5 km	NE
A-8	Vrundavan Colony	4.0 km	E

Table 10: Summary of Ambient Air Quality Results

Table 10.1: Particulate Matter – PM₁₀

Location Name	A-1	A-2	A-3	A-4	A-5	A-6	A-7	A-8
Minimum	52.02	41.14	41.14	42.31	42.24	40.92	41.58	41.27
Maximum	61.87	49.40	48.63	49.10	47.82	48.40	49.15	49.55
Average	56.60	44.95	44.74	45.12	45.24	44.96	45.29	44.99
98 th Percentile	61.72	49.00	48.61	48.87	47.79	48.31	48.80	48.76
CPCB Standards	100							

All Values are in µg/m³

Table 10.2: Particulate Matter – PM_{2.5}

Location Name	A-1	A-2	A-3	A-4	A-5	A-6	A-7	A-8
Minimum	15.38	12.87	14.92	13.31	13.21	12.82	13.21	13.25
Maximum	27.55	20.87	19.63	21.66	21.61	17.46	21.25	21.56
Average	21.13	17.42	17.39	17.82	16.56	15.25	16.21	16.93
98 th Percentile	26.44	20.32	19.58	20.99	20.55	17.40	20.47	21.24
CPCB Standards	60							

All Values are in µg/m³

Table 10.3: Sulphur Dioxide - SO₂

Location Name	A-1	A-2	A-3	A-4	A-5	A-6	A-7	A-8
Minimum	11.32	8.12	8.34	8.24	8.32	7.98	7.61	7.28
Maximum	17.61	11.87	11.54	11.87	11.89	11.62	11.65	11.76
Average	14.36	10.28	9.87	10.23	10.08	10.09	10.03	9.78
98 th Percentile	17.47	11.73	11.52	11.76	11.81	11.58	11.61	11.74
CPCB Standards	80							

All Values are in µg/m³

All Values are in µg/m³

Table 10.4: Oxides of Nitrogen – NO_x

Location Name	A-1	A-2	A-3	A-4	A-5	A-6	A-7	A-8
Minimum	19.27	12.54	12.84	12.54	12.35	12.64	12.85	12.14
Maximum	25.20	17.54	17.58	17.89	17.56	17.90	17.74	17.31
Average	21.97	15.30	15.23	15.25	15.03	15.28	15.24	15.09
98 th Percentile	25.06	17.53	17.57	17.76	17.55	17.77	17.67	17.28
CPCB Standards	80							

All Values are in µg/m³

Table 10.5: Carbon Monoxide – CO

Location Name	A-1	A-2	A-3	A-4	A-5	A-6	A-7	A-8
Minimum	0.002	0.002	0.005	0.012	0.005	0.002	0.008	0.003
Maximum	0.041	0.054	0.041	0.034	0.038	0.064	0.033	0.035
Average	0.019	0.020	0.018	0.019	0.019	0.024	0.019	0.017
98 th Percentile	0.041	0.052	0.035	0.030	0.037	0.058	0.032	0.035

All Values are in mg/m³

From the above results, it is observed that the ambient air quality with respect to PM₁₀, PM_{2.5}, SO₂, NO_x and CO at all the monitoring locations was within the permissible limits specified by CPCB.

As per the baseline data collection, the maximum value of the PM₁₀ was recorded at Project Site – 61.87 µg/m³ and minimum value at Nidhana Village – 40.92 µg/m³. As per the baseline data collection, the maximum value of the PM_{2.5} was recorded at Project site – 27.55 µg/m³ and minimum value at Nidhana Village – 12.82 µg/m³. As per the baseline data collection, the maximum value of the SO₂ was recorded at Project Site – 17.61 µg/m³ and minimum value at Vrundavan Colony – 7.28 µg/m³. As per the baseline data collection, the maximum value of the NO_x was recorded at Project Site – 25.20 µg/m³ and minimum value at Vrundavan Colony – 12.14 µg/m³.

3.3 Ambient Noise Levels

Ambient noise level monitoring was carried out at the 8 monitoring locations; those were selected for ambient air quality monitoring. The noise recording stations are shown in **Table 11**. The monitoring results are summarized in **Table 12**.

Table 11: Ambient Noise Quality Monitoring Stations

Code	Sampling Location	Distance w.r.t Project Site (km)	Direction w.r.t Project Site
N-1	Project Site	-	-
N-2	Daregaon Village	1.0 km	S
N-3	Javasgaon Village	4.0 km	W
N-4	Dhawalwadi Village	4.0 km	NW
N-5	Nagewadi Village	2.0 km	N
N-6	Nidhana Village	4.5 km	S
N-7	Chandanjhira Village	1.5 km	NE
N-8	Vrundavan Colony	4.0 km	E

Table 12: Summary of Ambient Noise Level Monitoring Results

Equivalent Noise levels	N-1	N-2	N-3	N-4	N-5	N-6	N-7	N-8
(Day) L_{Max}	57.3	53.2	54.1	58.2	52.0	56.5	57.1	52.4
(Day) L_{Min}	42.0	41.8	43.0	42.0	41.5	47.5	43.1	43.2
(Night) L_{Max}	39.5	38.5	38.6	39.4	40.5	39.8	40.2	39.2
(Night) L_{Min}	32.1	32.3	33.5	33.6	36.1	33.2	34.5	33.5
L_d	49.39	46.88	48.97	48.78	46.93	49.71	49.11	47.86
L_n	36.12	36.05	35.30	36.45	37.97	37.15	37.76	36.0
CPCB L_d	75	55	55	55	55	55	55	55
	70	45	45	45	45	45	45	45

L_{min} : Minimum Noise Level Recorded
 L_{max} : Maximum Noise Level Recorded
 L_d : Day Equivalent
 L_n : Night Equivalents
 L_{dn} : Day-Night Equivalents

Conclusion

The Maximum Noise (day) value was observed 58.2 dB (A) at Dhawalwadi Village (N-4) and the Minimum Noise (day) value was observed 41.5 dB (A) at Nagewadi Village (N-5). The Maximum Noise (night) value was observed 40.5 dB (A) at Nagewadi Village (N-5) and the Minimum Noise (night) value was observed 32.1 dB (A) at Project Site (N 1).

The maximum and minimum day time equivalent noise levels were found in the range of 46.88 to 49.71 dB (A) and the maximum and minimum night time equivalent noise levels were found in the range of 35.30 to 37.97 dB (A).

3.4 Surface and Ground Water Resources & Quality

Ground Water

- pH of the ground water samples collected was in the range of 7.41 - 8.1.
- Total dissolved solids in the samples were in the range of 246.6 – 484 mg/l.
- Total Hardness was found to vary between 131.7 – 165.2 mg/l.
- Chloride's concentration was found to vary between 117.8 – 177.0 mg/l.
- Fluoride concentration was found to vary between 0.024 – 0.046 mg/l.
- Sulphates concentration was found to vary between 35.5 – 74 mg/l.
- Heavy metal concentrations in all samples were found to be well within the limits.

Surface Water

Sampling was carried out at 2 locations during the study period. Sampling and analysis were carried out, as per standard methods and frequency of the sampling was thrice/stations.

The summary of the results is presented below:

- pH of the surface water samples collected was in the range of 7.03 – 7.54.
- Total Dissolved Solids in the samples was in the range of 206 - 217 mg/l.
- Total Hardness was found to vary between 146.3 – 151.2 mg/l.
- Chloride's concentration was found to vary between 140.6 – 171.7 mg/l.
- Fluoride concentration was found to vary between 0.035 – 0.058 mg/l.
- Sulphates concentration was found to vary between 56.4 – 65.3 mg/l.
- Heavy metal concentrations in all samples were found to be well within limits.

3.5 Land use Land Cover classification

The Land Cover classes and their coverage are summarized in **Table 13**

Table 13: Land use Pattern of the Study Areas

S. N.	Land Use Class (Level-I)	Land use/Land cover Classes (Level – II)	Area (Sq. Km)	Area (%)
1	Forest	Vegetation	4.99	1.59
3	Water bodies	Waterbody	8.09	2.58
4	Agricultural Land	Crop Land	118.33	37.68
		Fallow Land	61.54	19.60
6	Built-up Land	Built-up Land	35.64	11.35
6	Waste Land	Waste Land	85.41	85.41
		Total	314.00	100.00

3.6 Soil Quality

Sampling was carried out at 8 locations during the study period. The summary of the results is presented below:

- PH of the soil samples were found to be in the range of 7.08 – 8.0

- Organic content of the soil samples was found to be medium exhibiting in the range of 0.12 % - 0.65 % and average fertility
- Soils in the area were found to be Silty Clay Loam in texture with sand percentage in the range between 16 – 30 %, silt between 15 – 42 % and Clay 23 – 35 %.
- Conductivity was observed in the range of 0.15 – 2.48 $\mu\text{S}/\text{cm}$.
- Bulk density was observed in the range of 1.05 – 1.5 gm/cc.

3.7 Biological Environment

Rare and Endangered Flora in the Study Area

The IUCN Red List is the world's most comprehensive inventory of the global conservation status of plant and animal species. It uses a set of criteria to evaluate the extinction risk of thousands of species and subspecies. These criteria are relevant to all species and all regions of the world. With its strong scientific base, the IUCN Red List is recognized as the most authoritative guide to the status of biological diversity. **Among the enumerated flora in the study area, none of them were assigned any threat category, by RED data book of Indian Plants.**

Flora and fauna studies have been carried out in 10 km radius study area and no any endangered species were found out in the study area.

3.8 Socio-economic Environment

Information on socio-demographic status and the trends of the communities in the 10 km radius was collected through primary social survey and secondary data from census 2011 & village directory 2011. Summary of the socio-economic status of the study area is given in **Table 14.**

Table 14: Population Details

S. N.	Particulars	0-10 km
1	Number of households	70038
2	Male population	190704
3	Female population	179293
4	Total population	369997
5	SC population	50614
6	ST population	5769
7	Average household size	5.28
8	% Of males to the total Population	51.54

9	% Of females to the total population	48.46
10	Total Literates	253552
11	Male Literates	140718
12	Female Literates	112834

4.0 Environmental Impact Assessment and Mitigation Measures

4.1 Air Pollution

The air quality modeling has been done and the details of Incremental emission load due to construction activity contributing in existing baseline values is given in **Table 15**.

Table 15: Incremental Emission Load due to Construction Activity Contributing in Existing Baseline Values

Pollutants	Baseline Concentration ($\mu\text{g}/\text{m}^3$)	Incremental ($\mu\text{g}/\text{m}^3$)	Resultant ($\mu\text{g}/\text{m}^3$)	CPCB Norms
PM ₁₀	58.17	4.08	62.25	100 (24 hourly)
SO ₂	14.51	1.78	16.29	80 (24 hourly)
NO _x	25.81	7.62	33.43	80 (24 hourly)
CO (mg/m ³)	0	0.74	0.74	4 (1 hour)

Mitigation Measures

The predicted average concentrations with baseline along with the negligible proposed contribution from the project will be below the standards. Hence, considering the present and the future scenario, it can be concluded that there is minimal impact of the project. Whereas construction phase impacts have to be mitigated to the most so as to keep the air quality within prescribed standards. Therefore, following environment management measures need consideration the prevailing conditions;

- Air pollution control equipment's which includes fume extraction system with extraction hood and duct followed by bag filter is already installed. Now, in addition to this secondary air emission control system will be installed.
- 30 m height of two stacks are provided for existing operational plant and one more stack having height of 35 m will be installed for proposed expansion project.
- All trucks moving between railway siding to the plant site for transporting raw materials, solid waste & product shall be fully covered with tarpaulin to avoid dust pollution. With

strict traffic management system and various environmental management practices, contribution of pollutants in the ambient air will be kept under control so as to create minimum disturbances in the neighborhood.

- The vehicular traffic plying in and out of the project site will also be one of the significant sources of air pollution. It will be mitigated by properly regulating the traffic and by following strict and disciplined vehicular movement and operation in the project site.
- Adequate and planned road network will be set up in the proposed expansion project for smooth movement of the goods vehicles. It would be ensured that all the vehicles plying in the working zone are properly tuned and maintained to keep emissions within the permissible limits.
- At loading and unloading points, arrangement for Water sprinkling will be made so that dust generation during transportation of materials will be minimized further.
- All the internal roads within the plant shall be metaled; hence dust arising from the internal roads shall be insignificant. The greenbelt development shall further help in reduction in fugitive emissions.
- With strict traffic management system and various environmental management practices, contribution of pollutants in the ambient air will be kept under control so as to create minimum disturbances in the neighborhood.

4.2 Water Quality Management

The total water requirement of the plant is 596 KLD. Required water quantity will be sourced from MIDC & own water reservoir. The water will be mainly used for cooling purpose, greenbelt, dust suppression and domestic purpose only. Cooling water will be continuously recirculated in the cooling circuit and domestic effluent will be sent to sewage treatment plant. The water is supplied for cooling water in Induction Furnace. The water for other areas i.e., for greenbelt, dust suppression and domestic use is supplied directly. However, the Plant will be designed for Zero Discharge from the operations. Wastewater/ sewage (12.6 KLD) generated from domestic activities will be treated in the STP (Capacity: 15 KLD). Treated water will be used for green belt development. Zero discharge concept will be followed.

4.3 Noise Pollution Control

Noise level at the plant boundary, is expected to be less than 60 dB (A) without considering any attenuation factors.

Various components of industrial operations will cause some amount of noise, which will be controlled by proper maintenance and compact technology.

- i. Time to time oiling and servicing of machineries will be done.
- ii. Acoustic enclosure for DG sets will be provided.
- iii. Green belt development (plantation of dense trees across the boundary) will help in reducing noise levels in the plant as a result of attenuation of noise generated due to plant operations, and transportation.

4.4 Greenbelt Development and Plantation

Total Green belt Area: 3.90 ha

Total plant should be planted as per MoEF&CC recommendation

= 3.90 Ha. x 1500 = 5850 nos. of trees required.

Existing Tress available in green belt = 5835 Nos. Greenbelt will be developed & maintained by replacing the mortalities every year. In existing plant area, 33% (3.90 Ha.) area is developed as a greenbelt. For development of greenbelt Rs. 10 Lakhs are earmarked as a capital cost and Rs. 5 Lakhs as recurring cost.

4.5 Solid and Hazardous Waste Generation and Management

The details of solid and other waste generation are given below in **Table 16**.

Table 16: Solid & Other Waste Generation Details

S. N.	Particular	Existing Unit	Proposed Expansion	Total Quantity
1	Induction Furnace Slag	30.0 MTD	50.0 MTD	80.0 MTD
2	Process dust	1 MTM	1 MTM	2 MTM
3	Used and Waste oil	2.0 KL/Annum	2.5 KL/Annum	4.5 KL/Annum

1. Generated slags will be used for own brick manufacturing unit.
2. Used and waste oil will be sold to authorized vendor.
3. From the Process dust zinc will be recovered. Dust collected in bag filters will be sent to sister concern company of BRMPL group which is at distance of 200 m.

4. Fuel Consumption

Fuel consumption details for the proposed expansion project are given in **Table 17**.

Table 17: Fuel Consumption Details

S. N.	Type of fuel	Consumption Qty (MTM)		
		Existing	Proposed	Total
1	HSD	130	130	260
2	LDO	1250	1250	2500
3	Coal (For Rolling Mill Existing 15 TPH & for Expansion 20TPH)	100	100	200

4.6 Environment Management Plan

Details of environment management plan is given in **Table 18**.

Table 18: EMP Budget

S. N.	Item	Capital Cost (Rs. In Lakhs)	Recurring Cost (Rs. In Lakhs)
1	Air Pollution Control	140.00	5.0
2	RWH & Water Pollution Control	10.00	2.0
3	Noise Pollution Control	5.00	1.0
4	Environment Monitoring and Management	15.00	2.34
5	Occupational Health	2.00	1.0
6	Greenbelt Development	10.00	5.0
7	Safety Management	4.00	1.0
8	Laboratory and Chemicals	1.50	1.0
9	DG SET (2 x 500 KVA)	25.00	1.0
	Total Amount	212.50	19.34
	Total Amount (Capital Cost & Recurring Cost)	231.84	
	Total Amount (Capital Cost & Recurring Cost)	2.32 Crores	

4.7 Corporate Environment Responsibility

M/s. Bhagalaxmi Rolling Mills Pvt. Ltd. earmarked Rs. 75 lakhs towards Corporate Environment Responsibility (CER) as per Office Memorandum of MoEF&CC. Total project cost of the proposed expansion activity will be Rs. 75 Crores. CER is Calculated (@ 1.0 % of additional Capital Cost of the expansion project) as per MOEFCC OM Dated: 1st May 2018. Fund Allocation for the CER as per Office Memorandum is given in **Table 19**. CER budget is developed as per our understanding. However, it will be modified after completion of public hearing as per the needs/demands of the peoples in the public hearing and instruction of the Chairperson of the proposed public hearing. Proposed CER activities as per preliminary understanding is given in **Table 20**.

Table 19: Fund Allocation for the CER as per Office Memorandum

S. N.	Capital Investment/ Additional Capital Investment (in Rs.)	Greenfield Project - % of Capital Investment	Brownfield Project - % of Capital Investment
I	II	III	IV
1	≤ 100 Crores	2.0 %	1.0 %
2	> 100 Crores to ≤ 500 Crores	1.5 %	0.75 %
3	> 500 Crores to ≤ 1000 Crores	1.0 %	0.5 %
4	> 1000 Crores to ≤ 10000 Crores	0.5 %	0.25 %
5	> 10000 Crores	0.25 %	0.125 %

Table 20: Proposed CER Activities

S. N.	Planned Activities under CER as per specific needs	Total Amount in Rs. Lakhs
1	<p>Community Health Improvement.</p> <ul style="list-style-type: none"> • Health camps and health awareness programs in Project surrounding villages • Health awareness camps for child and mother care, health and hygiene practices • Sanitary facilities for project surrounding villages 	20.00
2	<p>Community Education Facilities</p> <ul style="list-style-type: none"> • Award scholarship to meritorious students & Education (Vocational training) • Distribution of educational books, stationary, uniforms and aids etc. • Providing desktop computers to schools 	10.00

3	Infrastructural Development <ul style="list-style-type: none"> • Maintenance/ Repair of Hand Pumps/ Bore wells • Gram Panchayat dug well de-siltation & deepening • Maintenance/ Repair of surrounding village roads 	20.00
4	Afforestation Programs <ul style="list-style-type: none"> • Plantation of trees in villages road side/ Panchayat House/ Public Health Center/ schools • Development of nursery • Scientific support and awareness to local farmers to increase yield of crop and fodder 	15.00
5	Community Welfare Activities <ul style="list-style-type: none"> • Solar Street Lights for common community area and village main approach roads as per the instruction of respective Gram Panchayat 	10.00
Total Amount (Rupees in Lakh)		75

5.0 Conclusion

As discussed, it is safe to say that the project is not likely to cause any significant impact on the ecology of the area, as adequate preventive measures will be adopted to contain the various pollutants within permissible limits. Green belt development around the area will also be taken up as an effective pollution mitigative technique, as well as to control the pollutants released from the premises of the project.
