

**Executive Summary**  
**of**  
**Draft Environmental Impact Assessment**  
**for**  
**M/s. Vasudha Alloys Pvt. Ltd.,**

**Expansion of Rolling Mill for Production of TMT Bars from 5,000 MTM to 30,000 MTM and New MS Billets Manufacturing Unit of Proposed Capacity 30,000 MTM**

**at**

**Gut No. 86, Village: Khadgaon, Taluka: Badnapur, District: Jalna, Maharashtra.**



**Project Proponent:**

**M/s. Vasudha Alloys Pvt. Ltd.,**

**Gut No. 86, Village: Khadgaon, Taluka: Badnapur, District: Jalna, Maharashtra.**

**Consultant**



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

**(Certificate No. NABET/EIA/2124/RA 0260, Validity: 21-11-2024)**

## EXECUTIVE SUMMARY CONTENTS

S. N.	Content	Page No.
1.0	Introduction	ES-1
1.1	Purpose of the Report	ES-1
1.2	Environmental Clearance	ES-2
1.3	Terms of Reference	ES-2
1.4	Nature, Size and Location of Project site	ES-2
2.0	Project Description	ES-9
2.1	Brief Description of Project	ES-9
2.2	Raw Material Requirement	ES-9
2.3	Water Requirement	ES-10
2.4	Land Requirement	ES-11
2.5	Power Requirement	ES-12
2.6	Man Power Requirement	ES-12
2.7	Technology and Process Description	ES-13
3.0	Baseline Environmental Studies	ES-15
3.1	Meteorology	ES-15
3.1.1	Summary of the Meteorological Data Generated at Site	ES-15
3.2	Ambient Air Quality Status	ES-17
3.3	Ambient Noise Levels	ES-20
3.4	Surface and Ground Water Resources & Quality	ES-23
3.5	Soil Quality	ES-27
3.6	Land use Land Cover classification	ES-29
3.7	Biological Environment	ES-30
3.8	Socio-economic Environment	ES-30
4.0	Environmental Impact Assessment and Mitigation Measures	ES-31
4.1	Air Pollution	ES-31
4.2	Water Quality Management	ES-33
4.3	Noise Pollution Control	ES-33
4.4	Greenbelt Development and Plantation	ES-34

4.5	Solid and Hazardous Waste Generation and Management	ES-34
4.6	Environment Management Plan	ES-35
4.7	Corporate Environment Responsibility	ES-35
5.0	Conclusion	ES-37
<b>FIGURES</b>		
Fig. 1	Location Map of the Project Site	ES-5
Fig. 2	10 km Topographic Study Area Map of the Project Site	ES-6
Fig. 3	Google Image of the Project Site	ES-7
Fig. 4	Project Layout Map	ES-8
Fig. 5	Water Balance Diagram	ES-11
Fig. 6 (A)	Process Flow Chart for Manufacturing of MS Billets	ES-14
Fig. 6 (B)	Manufacturing Process of TMT Bar	ES-14
Fig. 7	Wind Rose Diagram – March 2023 to May 2023 (IMD Specific)	ES-16
Fig. 8	Ambient Air Quality Monitoring Locations	ES-18
Fig. 9	Noise Monitoring Locations	ES-21
Fig. 10	Ground Water Sampling Locations	ES-24
Fig. 11	Surface Water Sampling Locations	ES-26
Fig. 12	Soil Sampling Locations	ES-28
Fig. 13	Pie Chart of Percentage wise Availability Land Use Land Covers Classes	ES-30
<b>TABLES</b>		
Table 1	Project Details & Environmental Setting in 10 km Study Area of the Project Site	ES-2
Table 2	Product Details	ES-9
Table 3 (A)	Raw Material Characteristics (MS Billets Manufacturing)	ES-10
Table 3 (B)	Raw Material Characteristics (TMT bar Manufacturing)	ES-10
Table 4	Water Requirement	ES-11
Table 5	Land Break-up Details	ES-12
Table 6	Power Requirement	ES-12
Table 7	Man Power Requirement	ES-13
Table 8	Furnace & Billets Production Details	ES-13
Table 9	Site Specific Climatological Data	ES-15

Table 10	Ambient Air Quality Monitoring Stations	ES-17
Table 11.1	Particulate Matter – PM <sub>10</sub>	ES-19
Table 11.2	Particulate Matter – PM <sub>2.5</sub>	ES-19
Table 11.3	Sulphur Dioxide - SO <sub>2</sub>	ES-19
Table 11.4	Oxides of Nitrogen – NO <sub>x</sub>	ES-19
Table 11.5	Carbon Monoxide – CO	ES-20
Table 12	Ambient Noise Quality Monitoring Stations	ES-20
Table 13	Summary of Ambient Noise Level Monitoring Results	ES-22
Table 14	Ground Water Sampling Locations	ES-23
Table 15	Surface Water Sampling Locations	ES-25
Table 16	Soil Sampling Locations	ES-27
Table 17	Land use Pattern of the Study Areas	ES-29
Table 18	Population Details	ES-30
Table 19 (A)	Incremental Emission Load due to Construction Activity Contributing in Existing Baseline Values due to Point Source	ES-31
Table 19 (B)	Incremental Emission Load due to Construction Activity Contributing in Existing Baseline Values due to Line Source	ES-32
Table 20	Solid & Other Waste Generation Details	ES-34
Table 21	Fuel Consumption Details	ES-34
Table 22	EMP Budget	ES-35
Table 23	Fund Allocation for the CER as per Office Memorandum	ES-36
Table 24	Proposed CER Activities	ES-36

\*\*\*\*\*

## **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 Purpose of The Report**

The project is being running with an installed capacity of 5,000 MTM/60,000 TPA of TMT Bar. **M/s. Vasudha Alloys Pvt. Ltd. (VAPL)** is proposing an expansion of existing production of TMT Bars from 5,000 MTM to 30,000 MTM and new MS Billets manufacturing unit of propose capacity 30,000 MTM at Gut No. 86, Village: Khadgaon, Taluka: Badnapur District: Jalna, Maharashtra. Earlier Re-Rolling/Cold Rolling Units/Cold Rolled Coils established or operating with Consent to Establish/Operate from concerned State Pollution Control Board (SPCB) and does not require Environmental Clearance. Now, as per National Green Tribunal Order, MoEF&CC revised its EIA Notification, 2006 & made mandatarly to obtain Environmental Clearance for such industries. M/s. Vasudha Alloys Pvt. Ltd. received MPCB Circular vide Ref. No.: MPCB/JD(APC)/Rolling Mill/TB/B-0141 Dated: 20/07/2021 for obtaining Environmental Clearance for its installed Rolling Mill which is having production capacity of 5,000 MTM. Accordingly, we are applying to obtain Environmental Clearance for Rolling Mill with expansion activity from 5,000 MTM to 30,000 MTM and new MS Billets manufacturing unit of proposed capacity 30,000 MTM. As per EIA Notification, 2006 secondary metallurgical processing industrial units for M/s. Vasudha Alloys Pvt. Ltd. submitted the application for obtaining Environmental Clearance with prescribed Form 1, Form 1A and proposed Terms of Reference for obtaining TOR for the project on Dated: 9<sup>th</sup> February 2023 to MoEF&CC, New Delhi vide Proposal No: SIA/MH/IND/1417597/2023. Project proponent operating the existing plant for manufacturing of TMT Bars by obtaining "Consent to Operate". "Consent to Operate" was issued to the project by MPCB vide Consent No.: RO-AURANGABAD/CONSENT/1811000312 Dated: 05/11/2018 which is valid up to 31/10/2028.

The screening category is B appraised at state level. The proposed project is categorized as 3(a) B, Secondary Metallurgical Industries (Ferrous & Non-Ferrous)

## 1.2 Environmental Clearance

Proposed project activity falls in Category of Metallurgical Industries (Ferrous & Non-Ferrous) Sector 8 as per NABET scheme and 3(a) as per MoEF&CC Notification. As per the Environmental Impact Assessment (EIA); Notification S.O. 1533, 14.09.2006 and its subsequent amendments made time to time by MoEFCC, Government of India, the MS Billets & TMT Bars Manufacturing Unit is categorized as Category B project which mandates obtaining prior Environmental Clearance from Ministry of Environment, Forest and Climate Change.

## 1.3 Terms of Reference

M/s. Vasudha Alloys 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 vide proposal no.: SIA/MH/IND1/417597/2023 Dated: 13<sup>th</sup> February 2023.

## 1.4 Nature, Size and Location of Project Site

**M/s. Vasudha Alloys Pvt. Ltd., (VAPL)** is proposing an expansion of existing production of TMT Bars from 5,000 MTM to 30,000 MTM and new MS Billets manufacturing unit of propose capacity 30,000 MTM at Gut No. 86, Village: Khadgaon, Taluka: Badnapur District: Jalna, Maharashtra. The project location map is given in **Figure 1.1**, 10 km study area map is given in **Figure 1.2**, Google image of the project is given in **Figure 1.3** and project layout map is given in **Figure 1.4**. Project Details & Environmental Setting in 10 km Study Area of the Project Site is given in below **Table 1**.

**Table 1: Project Details & Environmental Setting in 10 km Study Area of the Project Site**

Project Name	<b>M/s. Vasudha Alloys Pvt. Ltd.</b>			
Total Proposed Area	Existing Area – 16,100 sq. m Proposed Area – 11,990.00 sq. m Total Area – 28,090.00 sq. m			
Location of the Project	Gut No. 86, Village: Khadgaon, Taluka: Badnapur, District: Jalna, Maharashtra.			
Project Site Latitudes & Longitudes	<b>S. N.</b>	<b>Latitude (N)</b>	<b>Longitude (E)</b>	
	A	19°53'13.56"N	75°48'45.12"E	
	B	19°53'11.97"N	75°48'45.38"E	
	C	19°53'10.20"N	75°48'45.13"E	
	D	19°53'11.71"N	75°48'34.80"E	

	E	19°53'14.90"N	75°48'35.42"E	
Project Site falling in GSI Toposheet	47M/9 & 47M/13			
Production Capacity	<b>Proposed Production Capacity</b> <b>Rolling Mill (TMT Bars):</b> Existing Rolling Mill: 5,000 MTM/60,000 MTPA Proposed Rolling Mill: 25,000 MTM/3,00,000 MTPA Total Capacity After Expansion: 30,000 MTM/3,60,000 MTPA <b>MS Billets:</b> Proposed New MS Billets Manufacturing: 30,000 MTM/3,60,000 MTPA			
Raw Material	<b>For MS Billets:</b> MS Scrap: 600 TPD Sponge Iron: 400 TPD Other Minerals: 70 TPD <b>For Rolling Mill:</b> MS Billets: 1,000 TPD			
Water Demand	<b>Existing Water Requirement</b> For Rolling Mill: 15 KLD For Domestic: 4.5 KLD Dust Suppression: 1 KLD Greenbelt Development: 1 KLD <b>Total Water Requirement: 21.5 KLD</b> <b>Proposed Water Requirement for Expansion:</b> For Process: 250 KLD Domestic: 9.0 KLD Dust Suppression: 4 KLD Greenbelt Development: 10.1 KLD <b>Total Water Requirement: 273.1 KLD</b> <b>Total Water Requirement after Expansion:</b> For Process: 265 KLD Domestic: 13.5 KLD Dust Suppression: 5 KLD Greenbelt Development: 11.1 KLD <b>Total Water Requirement: 294.6 KLD</b> <b>Total Water Requirement: 295 KLD (Rounded Off)</b>			
Sources of Water	Industrial Water Requirement: By Private Tankers/Ground Water Domestic Water Requirement: Ground Water after obtaining requisite permission from CGWA			

Executive Summary for Proposed Expansion in Production of TMT Bars from 5,000 MTM to 30,000 MTM and New MS Billets Manufacturing Unit of Proposed Capacity 30,000 MTM at Gut No. 86, Village: Khadgaon, Taluka: Badnapur, District: Jalna, Maharashtra by M/s. Vasudha Alloys Pvt. Ltd.

Man Power	Existing Man power: 100 Nos. Proposed Man Power: 200 Nos. Total Manpower: 300 Nos.
Electricity Consumption	Existing Electricity consumption: 3 MW Proposed Electricity consumption: 42 MW Total Electricity consumption will be: 45 MW Source: Maharashtra State Electricity Distribution Company Ltd. (MSEDCL)
Nearest railway station	Jalna Railway Station – 10.0 km, SE
Nearest airport	Aurangabad Airport – 44 km, SW
Proposed expansion cost	Existing Project Cost: Rs. 4.50 Crores Proposed Project Cost: Rs. 150.0 Crores Total Project Cost after Expansion: Rs. 154.50 Crores
EMP Budget	Capital Cost: Rs. 325 Lakhs Recurring Cost: Rs. 20.34 Lakhs Total EMP Cost: Rs. 345.34 Lakhs (Rs. 3.45 Crores)
Time of Completion	24 Months (From the zero date – Start of the project work)



Executive Summary for Proposed Expansion in Production of TMT Bars from 5,000 MTM to 30,000 MTM and New MS Billets Manufacturing Unit of Proposed Capacity 30,000 MTM at Gut No. 86, Village: Khadgaon, Taluka: Badnapur, District: Jalna, Maharashtra by M/s. Vasudha Alloys Pvt. Ltd.

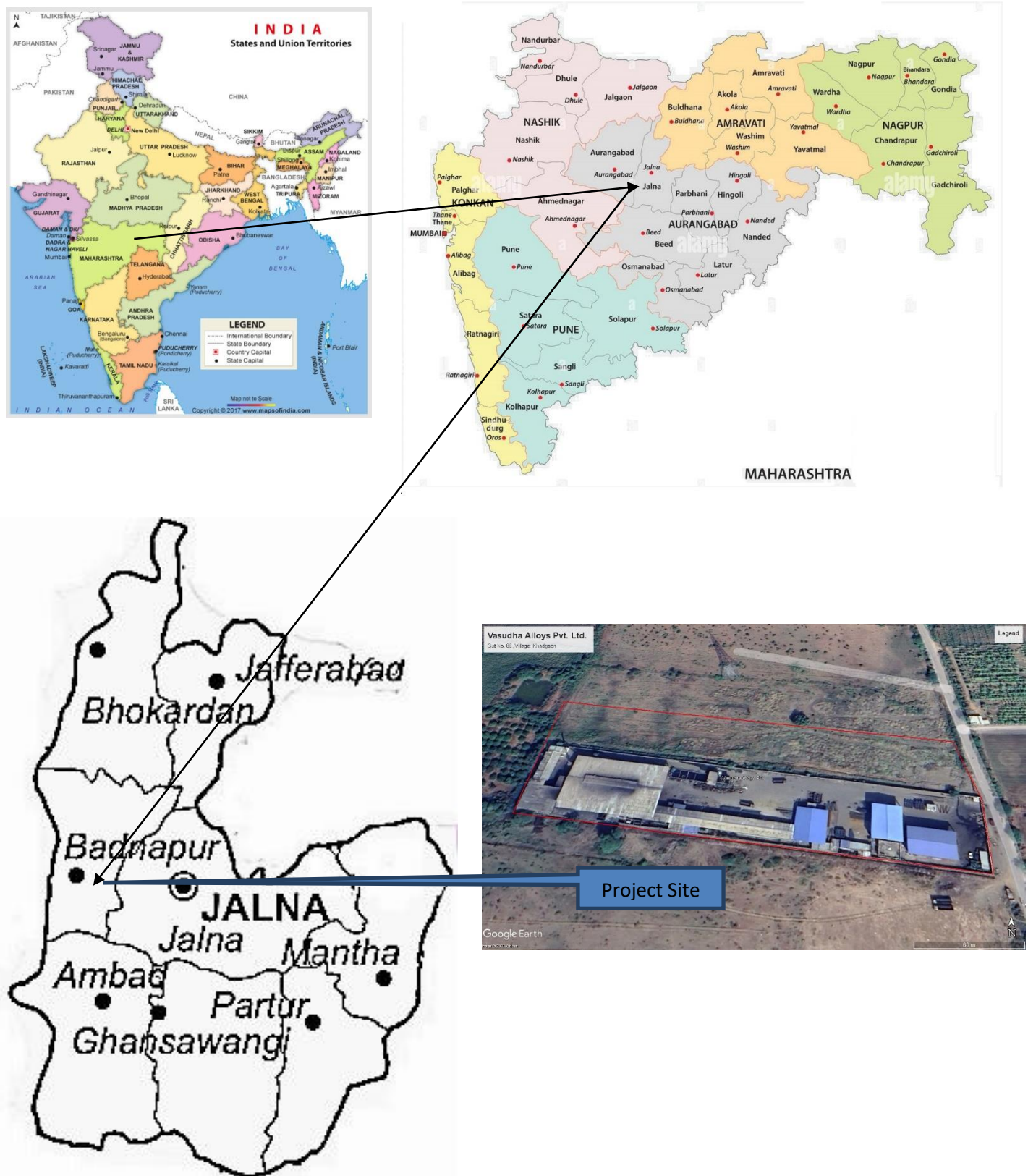


Figure 1: Location Map of the Project Site



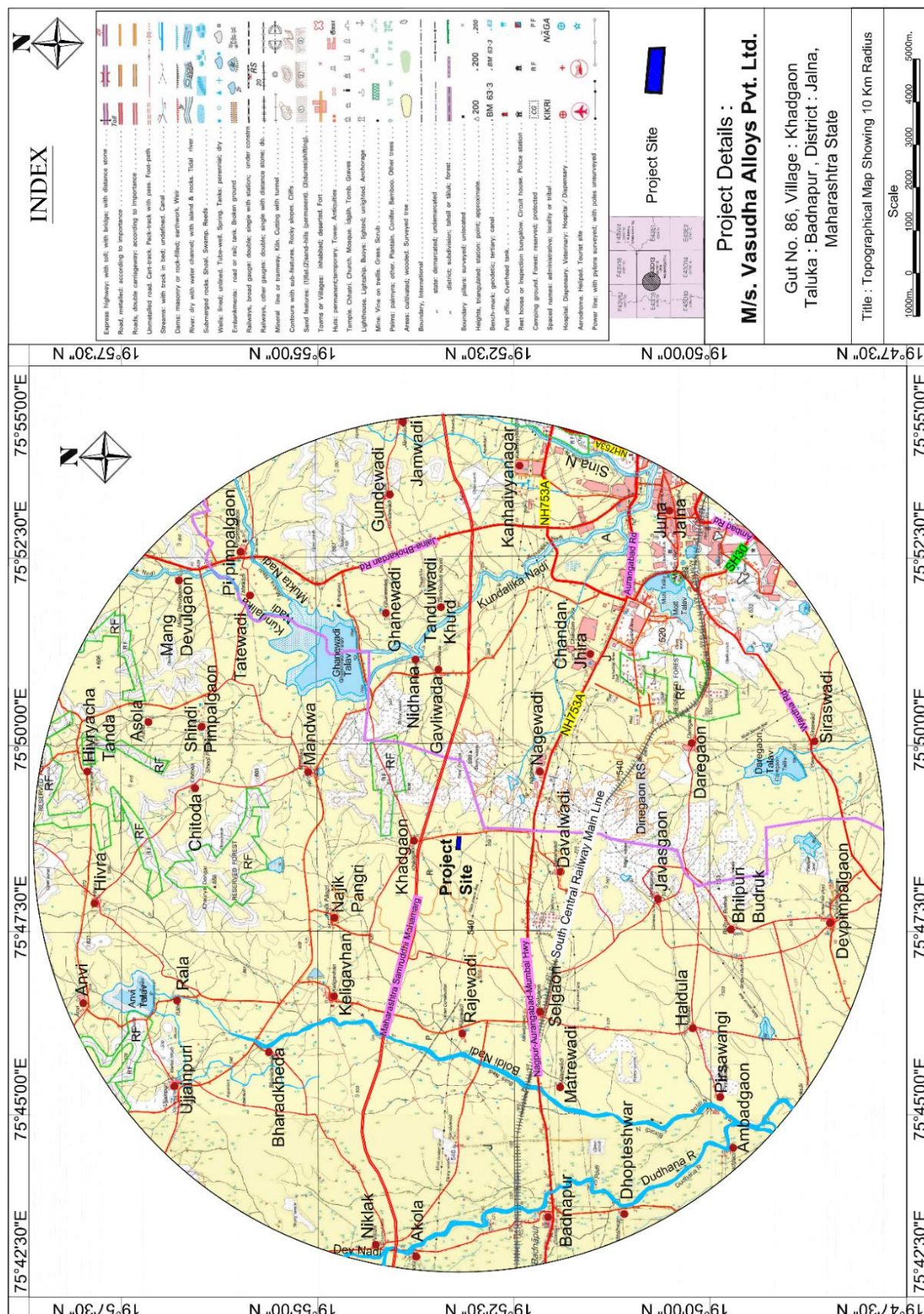


Figure 2: 10 km Topographic Study Area Map of the Project Site





Figure 3: Google Image of the Project

[illegible]



## **2.0 Project Description**

### **2.1 Brief Description of Project**

The project is an expansion of Rolling Mill for production of TMT Bars from 5,000 MTM to 30,000 MTM and New MS Billets Manufacturing unit of proposed Capacity 30,000 MTM at Gut No. 86, Village: Khadgaon, Taluka: Badnapur District: Jalna, Maharashtra State. Total available Land with VAPL is 28,090.00 sq. m (Existing plot area: 16,100 sq. m, Proposed plot area: 11,990.00 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 2**.

**Table 2: Product Details**

Production Capacity			
Product	Existing	Proposed	Total
MS Billets	-	30,000 MTM	30,000 MTM
TMT Bar (Rolling Mill)	5,000 MTM	25,000 MTM	30,000 MTM

### **Project Proponents**

The Vasudha Alloys Private Limited is a Private Company incorporated formed on 14th July 2018. It is classified as a non-govt. company and is registered at Registrar of Companies, Mumbai. It is involved in Manufacture of Basic Iron & Steel. The Directors of Vasudha Alloys Private Limited are Umesh Ramprasad Dad and Amit Subhash Magre. They have formed this company are taking production of TMT Bars of 5,000 MTM. They are bringing MS billets from the nearby steel industries and manufacturing TMT bars for which they have installed rolling mill. Now, they are proposed to increase the production capacity of TMT bars from existing 5,000 MTM (60,000 MTPA) to 30,000 MTM (3,60,000 MTPA) by adding 25,000 MTM (3,00,000 MTPA) and to start the production of MS Billets by installing two induction furnaces having capacity of 30,000 MTM (3,60,000 MTPA). Induction furnaces will be having capacity of 2 x 50 Tons which will have 10 heats.

### **2.2 Raw Material Requirement**

The raw materials required for the existing and proposed production of TMT Bars and MS Billets is given below in **Table 3(A)** and **Table 3(B)**.

**Table 3(A): Raw Material Characteristics (MS Billets Manufacturing)**

S. N.	Particular	Existing Quantity (TPD)	Proposed Quantity (TPD)	Total Quantity (TPD)	Source	Mode of Transportation
1	Scrap	0	600	600	Open Market	By road
2	Sponge Iron	0	400	400	Open Market	By road
3	Other Minerals	0	70	70	Open Market	By road
<b>Total</b>		<b>0</b>	<b>1,070</b>	<b>1,070</b>		

**Table 3(B): Raw Material Characteristics (TMT Bar Manufacturing)**

S. N.	Particular	Existing Quantity (MTM)	Proposed Quantity (MTM)	Total Quantity (MTM)	Source
1	MS-Billets	5,000	25,000	30,000	Existing: From Open Market After Project Completion: In-house (Captive production of MS billets)

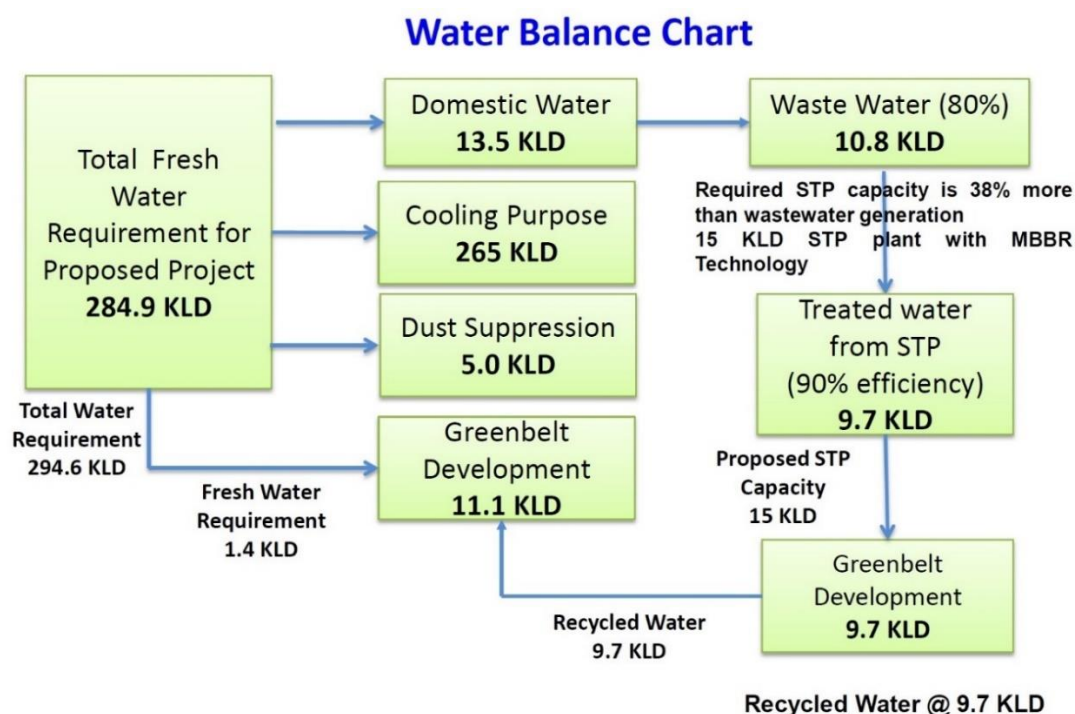
### 2.3 Water Requirement

The manufacturing process does not require water for the proposed project activity. The water requirement in the project will be for cooling purpose, dust suppression, domestic consumption and greenbelt development. Existing water requirement of the project is 21.5 KLD and water requirement for proposed expansion will be 273.1 KLD. Total water requirement of the proposed project after expansion will be 295 KLD. Domestic water requirement will be 13.5 KLD after expansion activity. Requirement of water will be fulfilled by private water tankers/ground water for industrial purposes and domestic water requirement will be met by ground water after obtaining CGWA permission for the same. Up to obtaining CGWA permission for domestic water, it will be met by private water tankers. The details of water requirement for different purposes are presented in **Table 4** Water Balance Diagram for the proposed expansion project activity is shown in below **Figure 5**.

**Table 4: Water Requirement**

S. N.	Item	Existing (KLD)	Proposed (KLD)	Total (KLD)
1	Cooling Purpose	15	250	265
2	Domestic Purpose	4.5	9.0	13.5
3	Dust Suppression	1	4	5
4	Greenbelt Development	1	10.1	11.1
	<b>Total</b>	<b>21.5</b>	<b>273.1</b>	<b>294.6</b>
	<b>Total Water Requirement (Rounded Off)</b>			<b>295</b>

\* All values in KLD



**Figure 5: Water Balance Diagram**

## 2.4 Land Requirement

VAPL has having total 28,090.00 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 5**. Green belt will be developed in 33% area which is being 9,256.00 sq. m.

**Table 5: Land Break-up Details**

S. N.	Particulars	Land Area in sq. m	Land Area in Percentage (%)
1	Built up Area	8,707.00	31
2	Green Belt Area	9,256.00	33
3	Parking Area	1,123.00	4
4	Road Area	6,053.00	21
5	Open Area	2,951.00	11
	<b>Total</b>	<b>28,090.00</b>	<b>100</b>

## 2.5 Power Requirement

The total power requirement after expansion will be 45 MW. The power will be sourced from the Maharashtra State Electricity Distribution Company Limited (MSEDCL). The details of Existing and Proposed power requirement are given in **Table 6**.

**Table 6: Power Requirement**

S. N.	Particular	Quantity	Source
1	Electricity for Existing Rolling Mill and Other Equipment's	<b>3.0 MW</b>	MSEDCL
2	Proposed	32 MW for Induction furnace. 10 MW for Rolling Mill <b>Total = 42.0 MW</b>	
	<b>Total after Expansion</b>	<b>45.0 MW</b>	

Backup Power: DG Set Provided

Existing DG Set: 1 X 250 KVA = 250 KVA

Proposed DG Set: 2 X 500 KVA = 1,000 KVA

**Total DG Sets Provided after expansion: 3 Nos.**

**Total Power Generation Capacity of all 3 DG sets = 1,250 KVA**

## 2.6 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 7**.



**Table 7: Man Power Requirement**

S. N.	Particular	Numbers
1	Existing	100
2	Proposed	200
	<b>Total</b>	<b>300</b>

## 2.7 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 8**.

**Table 8: TMT Bar & Billets Production Details**

<b>TMT Bar and Billets production details</b>	<b>Reheating Furnace (Rolling Mill):</b> Existing Reheating Furnace: 1 x 20 TPH Proposed Reheating Furnace: 1 x 20 TPH Total Reheating Furnace: 2 x 20 TPH <b>Total TMT Bars Production:</b> 2 x 20 TPH = 40 TPH 960 TPD (24 Hrs. X 40 TPH)	<b>Proposed MS Billets Production:</b> 2 x 50 MT (10 Heats) (2 x 50 MT X 10 Heats = 1,000 TPD) Total Monthly/Yearly Production: 30,000 MTM/3,60,000 MTPA
---	---	--

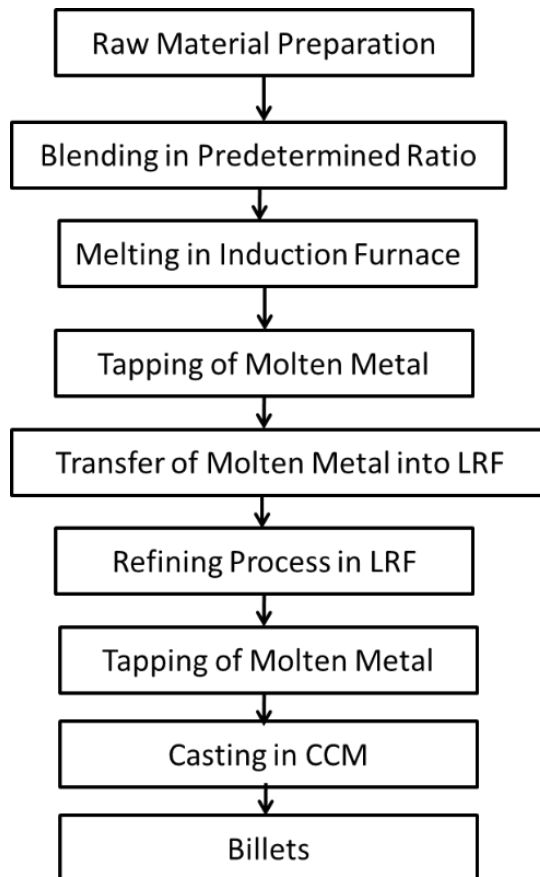


Figure 6 (A): Process Flow Chart for Manufacturing of MS Billets

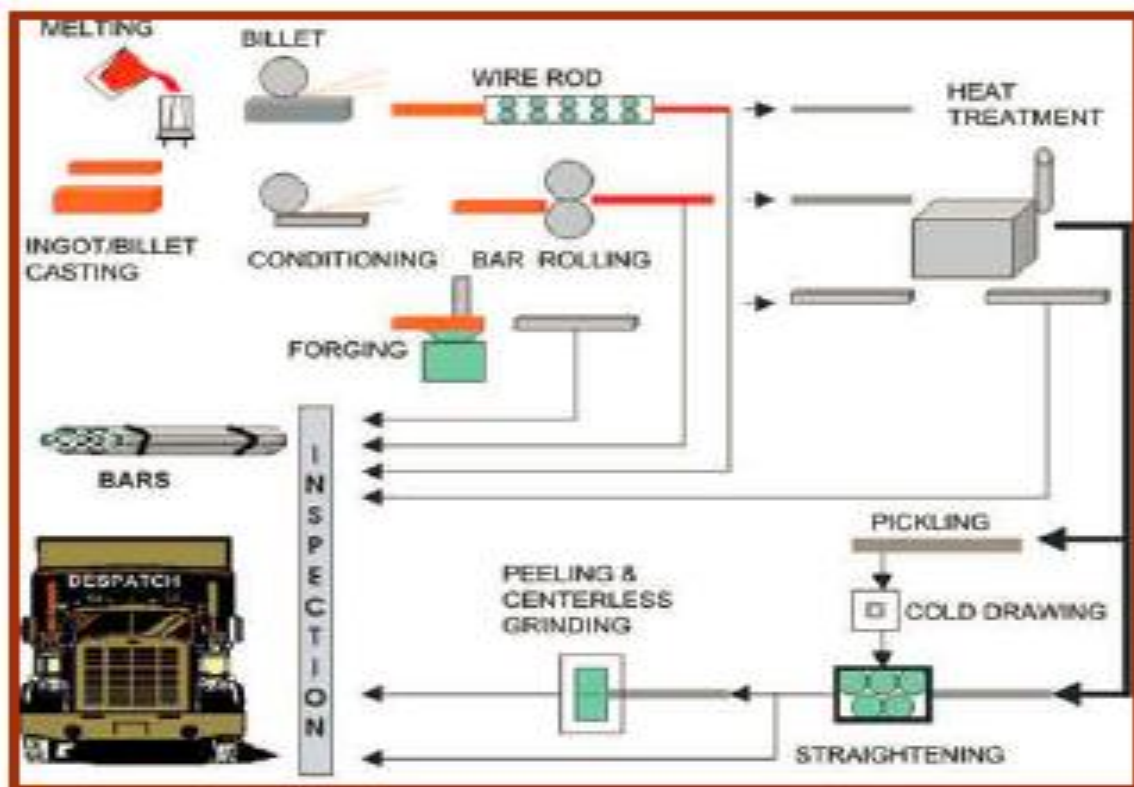


Figure 6 (B): Manufacturing Process of TMT Bar

### 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 March to May 2023 in the study area covering 10 km radius around the Plant area.

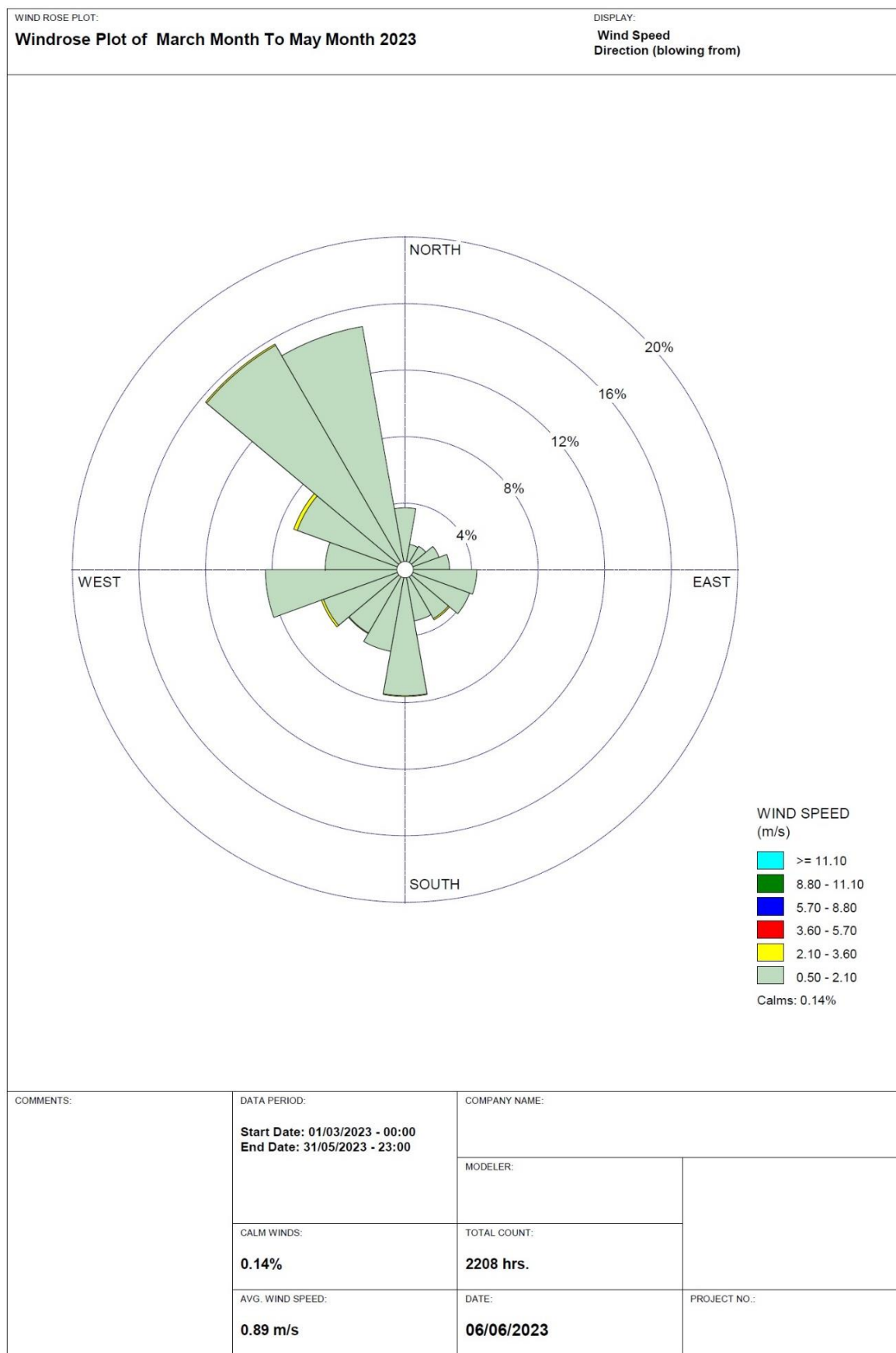
#### 3.1 Meteorology

##### 3.1.1 Summary of the Meteorological Data Generated at Site

The site-Specific meteorological data is given in **Table 9** and wind rose diagram is given in **Figure 7**.

**Table 9: Site Specific Climatological Data**

Month	Temperature (°C)		Relative Humidity (%)		Rainfall (mm)
	Min	Max	Min	Max	
March 2023	27.8	35.7	32.1	77.5	10
April 2023	27.8	38.8	18.3	68.2	9
May 2023	27.2	39.1	11.1	67.7	11
Total					30



**Figure 7: Wind Rose Diagram – March to May 2023 (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 March to May 2023 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 (PM<sub>10</sub>), Fine Particulates (PM<sub>2.5</sub>), Sulphur Dioxide (SO<sub>2</sub>), and Oxides of Nitrogen (NO<sub>x</sub>) were monitored. Based on the above, the AAQ stations have been identified and locations of ambient air quality stations are presented in **Table 10**. The locations of ambient air quality monitoring stations in the study area are given below in **Figure 8** and minimum and maximum values of PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>x</sub> & CO are summarized in **Table 11.1, 11.2, 11.3, 11.4 & 11.5**.

**Table 10: Ambient Air Quality Monitoring Stations**

S. N.	Code	Sampling Location	Distance w.r.to Project Site (km)	Direction w.r.to Project Site
1	A1	Gut No. 86, Village: Khadgaon, Taluka: Badnapur, District: Jalna	-	-
2	A2	Khadgaon Village	1.0 km	N
3	A3	Nidhona Village	4.0 km	NE
4	A4	Kanhaiyyanagar	8.5 km	NE
5	A5	Nagewadi Village	2.5 km	SE
6	A6	Davalwadi Village	2.5 km	S
7	A7	Rajewadi Village	4.0 km	W
8	A8	Keligavhan Village	5.0 km	NW



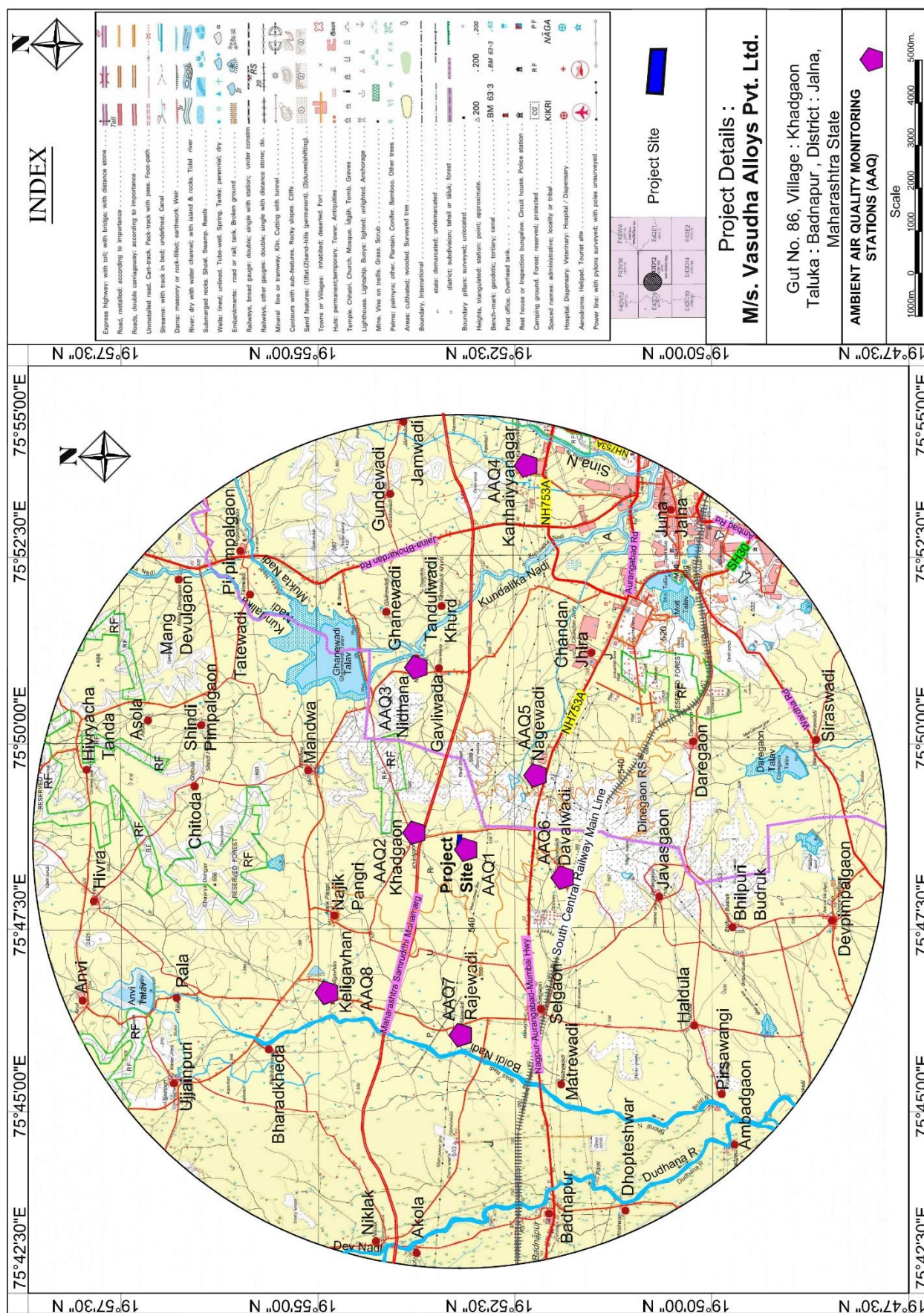


Figure 8: Ambient Air Quality Monitoring Locations

### Summary of Ambient Air Quality Results

**Table 11.1: Particulate Matter – PM<sub>10</sub>**

Location Name	A1	A2	A3	A4	A5	A6	A7	A8
Minimum	64.1	44.3	46.9	42.2	47.9	47.9	50.0	50.4
Maximum	77.4	57.3	58.8	62.0	59.6	72.2	68.9	64.9
Average	69.7	50.7	53.6	54.9	55.0	63.4	57.4	57.3
98 <sup>th</sup> Percentile	76.2	56.8	58.2	61.9	59.5	70.9	67.1	64.4
<b>CPCB Standards</b>	<b>100</b>							

All Values are in  $\mu\text{g}/\text{m}^3$

**Table 11.2: Particulate Matter – PM<sub>2.5</sub>**

Location Name	A1	A2	A3	A4	A5	A6	A7	A8
Minimum	31.1	22.1	21.0	21.2	21.4	24.2	24.2	24.1
Maximum	36.8	29.8	29.3	31.4	27.4	35.5	34.9	32.4
Average	32.7	25.8	25.4	26.8	25.1	31.3	28.3	28.4
98 <sup>th</sup> Percentile	36.3	29.5	29.2	30.7	27.4	35.3	33.8	31.8
<b>CPCB Standards</b>	<b>60</b>							

All Values are in  $\mu\text{g}/\text{m}^3$

**Table 11.3: Sulphur Dioxide - SO<sub>2</sub>**

Location Name	A1	A2	A3	A4	A5	A6	A7	A8
Minimum	14.2	12.1	13.5	11.2	10.5	10.4	10.5	10.9
Maximum	19.4	15.9	17.8	13.7	12.7	12.9	14.2	14.1
Average	16.8	13.9	15.0	12.6	11.3	11.7	12.3	12.5
98 <sup>th</sup> Percentile	19.3	15.9	17.5	13.7	12.6	12.9	14.2	14.0
<b>CPCB Standards</b>	<b>80</b>							

All Values are in  $\mu\text{g}/\text{m}^3$

**Table 11.4: Oxides of Nitrogen – NO<sub>x</sub>**

Location Name	A1	A2	A3	A4	A5	A6	A7	A8
Minimum	18.9	14.0	15.2	15.1	14.2	14.0	15.2	14.0
Maximum	23.8	19.0	20.2	18.0	18.0	17.1	19.6	17.9
Average	21.1	17.0	17.4	16.5	16.3	15.8	17.4	16.0
98 <sup>th</sup> Percentile	23.8	19.0	20.2	18.0	18.0	17.0	19.4	17.8
<b>CPCB Standards</b>	<b>80</b>							

All Values are in  $\mu\text{g}/\text{m}^3$

**Table 11.5: Carbon Monoxide – CO**

Location Name	A1	A2	A3	A4	A5	A6	A7	A8
Minimum	0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Maximum	0.8	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Average	0.6	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
98 <sup>th</sup> Percentile	0.8	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

All Values are in mg/m<sup>3</sup>

## Conclusion

From the above results, it is observed that the ambient air quality with respect to PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>x</sub> 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 PM<sub>10</sub> was recorded at Project Site – 77.4 µg/m<sup>3</sup> and minimum value at Kanhaiyyanagar – 42.2 µg/m<sup>3</sup>. As per the baseline data collection, the maximum value of the PM<sub>2.5</sub> was recorded at Project site – 36.8 µg/m<sup>3</sup> and minimum value at Nidhona Village – 21.0 µg/m<sup>3</sup>. As per the baseline data collection, the maximum value of the SO<sub>2</sub> was recorded at Project Site – 19.4 µg/m<sup>3</sup> and minimum value at Davalwadi Village – 10.4 µg/m<sup>3</sup>. As per the baseline data collection, the maximum value of the NO<sub>x</sub> was recorded at Project Site – 23.8 µg/m<sup>3</sup> and minimum value at Khadgaon, Davalwadi and Keligavhan Village – 14.0 µg/m<sup>3</sup>.

## 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 12**. The monitoring results are summarized in **Table 13** and the noise recording stations are shown in **Figure 9**.

**Table 12: Ambient Noise Quality Monitoring Stations**

S.N.	Code	Sampling Location	Distance w.r.t Project Site (km)	Direction w.r.t Project Site
1	N1	Gut No. 86, Village: Khadgaon, Taluka: Badnapur, District: Jalna	-	-
2	N2	Khadgaon Village	1.0 km	N
3	N3	Nidhona Village	4.0 km	NE
4	N4	Kanhaiyyanagar	8.5 km	NE
5	N5	Nagewadi Village	2.5 km	SE
6	N6	Davalwadi Village	2.5 km	S
7	N7	Rajewadi Village	4.0 km	W
8	N8	Keligavhan Village	5.0 km	NW



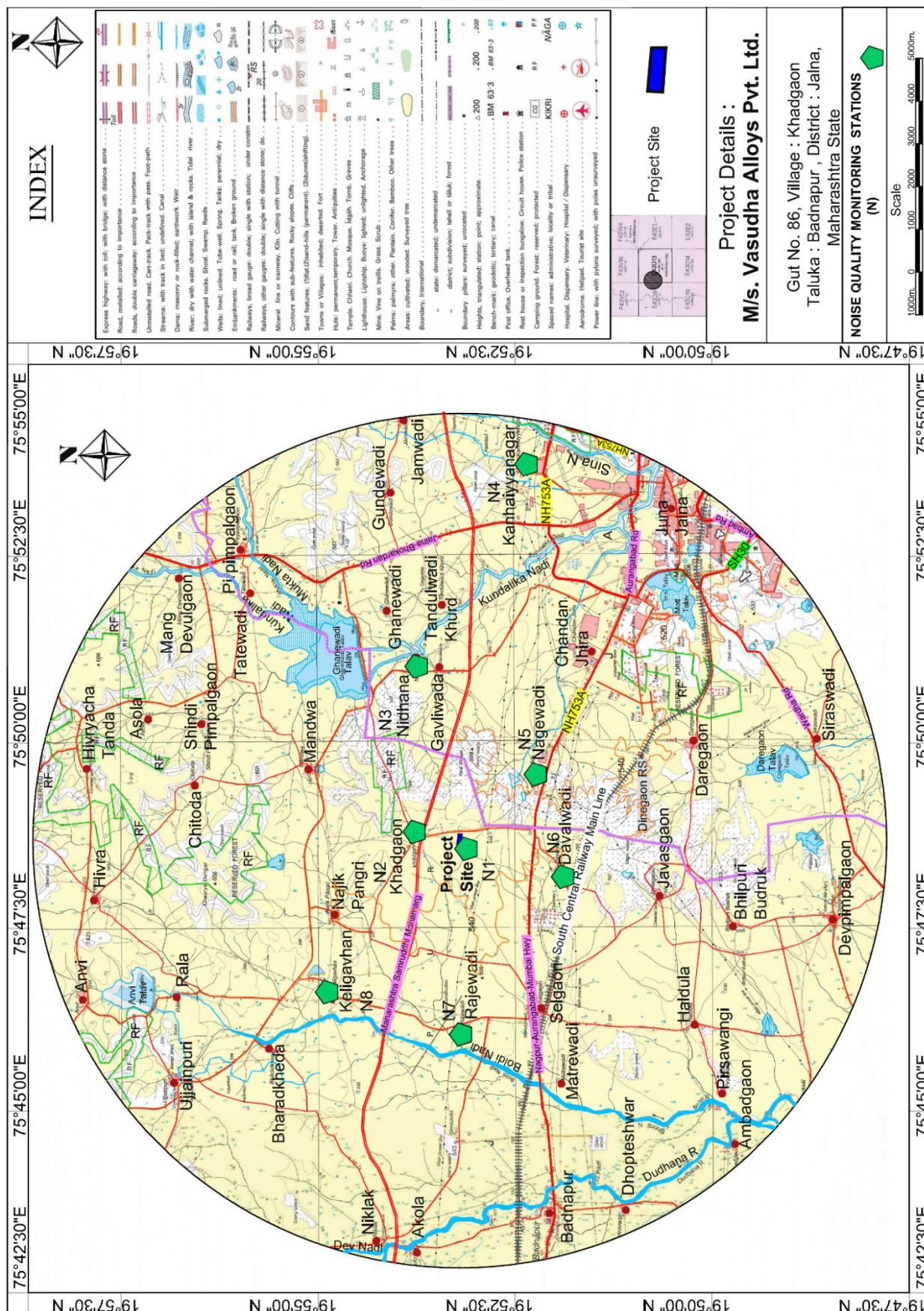


Figure 9: Noise Monitoring Locations

**Table 13: Summary of Ambient Noise Level Monitoring Results**

<b>Equivalent Noise levels</b>	<b>N1</b>	<b>N2</b>	<b>N3</b>	<b>N4</b>	<b>N5</b>	<b>N6</b>	<b>N7</b>	<b>N8</b>
<b>(Day) L<sub>Max</sub></b>	68.5	57.8	55.3	55.2	55.6	55.2	57.3	56.3
<b>(Day) L<sub>Min</sub></b>	54.2	42.8	42.1	42.6	40.1	41.2	43.2	40.2
<b>(Night) L<sub>Max</sub></b>	61.3	49.3	48.3	44.3	44.6	49.6	48.5	48.6
<b>(Night) L<sub>Min</sub></b>	50.2	41.1	40.6	38.3	37.6	40.5	42.1	41.1
<b>L<sub>d</sub></b>	<b>64.5</b>	<b>53.2</b>	<b>51.8</b>	<b>51.2</b>	<b>51</b>	<b>51.6</b>	<b>52.4</b>	<b>52.6</b>
<b>L<sub>n</sub></b>	<b>53.5</b>	<b>42.6</b>	<b>42.2</b>	<b>40.8</b>	<b>40.3</b>	<b>42.1</b>	<b>43.6</b>	<b>43.6</b>
<b>CPCB L<sub>d</sub></b>	<b>75</b>	<b>55</b>	<b>55</b>	<b>55</b>	<b>55</b>	<b>55</b>	<b>55</b>	<b>55</b>
<b>L<sub>n</sub></b>	<b>70</b>	<b>45</b>	<b>45</b>	<b>45</b>	<b>45</b>	<b>45</b>	<b>45</b>	<b>45</b>

L<sub>min</sub> : Minimum Noise Level Recorded  
 L<sub>max</sub> : Maximum Noise Level Recorded  
 L<sub>d</sub> : Day Equivalent  
 L<sub>n</sub> : Night Equivalents  
 L<sub>dn</sub> : Day-Night Equivalents

## Conclusion

The Maximum Noise (day) value was observed 68.5 dB (A) at Project Site (N1) and the Minimum Noise (day) value was observed 40.1 dB (A) at Nagewadi Village (N5). The Maximum Noise (night) value was observed 61.3 dB (A) at Project Site (N1) and the Minimum Noise (night) value was observed 37.6 dB (A) at Nagewadi Village (N5).

The maximum and minimum day time equivalent noise levels were found in the range of 64.5 to 51 dB (A) and the maximum and minimum night time equivalent noise levels were found in the range of 53.5 to 40.3 dB (A).

### 3.4 Surface and Ground Water Resources & Quality

#### Ground Water Sampling Locations:

Ground water sampling locations were selected surrounding within 10 km study area. Total 8 ground water samples were collected and analyzed from the study area. The locations of ground water sampling with its distance and direction w.r.to the project site are given in **Table 14** and the locations of water sampling are shown in **Figure 10**.

**Table 14: Ground Water Sampling Locations**

S. N.	Code	Location	Distance w.r.t Project	Direction w.r.t Project
1	GW1	Gut No. 86, Village: Khadgaon, Taluka: Badnapur, District: Jalna	-	-
2	GW2	Khadgaon Village	1.0 km	N
3	GW3	Nidhona Village	4.0 km	NE
4	GW4	Kanhaiyyanagar	8.5 km	NE
5	GW5	Nagewadi Village	2.5 km	SE
6	GW6	Dawalwadi Village	2.5 km	S
7	GW7	Rajewadi Village	4.0 km	W
8	GW8	Keligavhan Village	5.0 km	NW



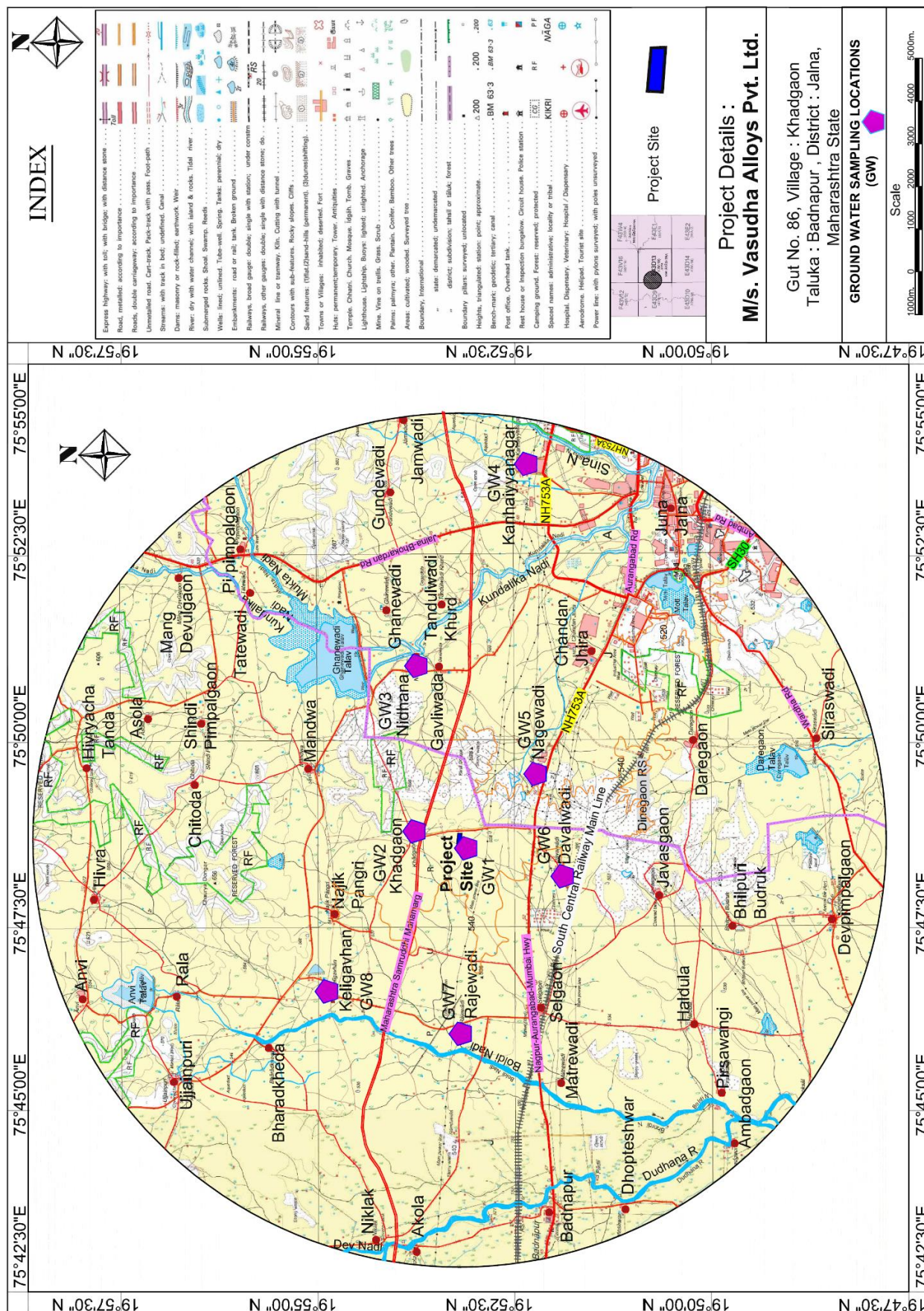


Figure 10: Ground Water Sampling Locations

### Conclusion:

- pH of the ground water samples collected was in the range of 7 – 7.7.
- Total dissolved solids in the samples were in the range of 372 – 496 mg /l.
- Total Hardness was found to vary between 130 – 240 mg/l.
- Chloride's concentration was found to vary between 95– 142 mg/l.
- Fluoride concentration was found to <0.5 mg/l.
- Sulphates concentration was found to vary between 29– 62 mg/l.
- Heavy metal concentrations in all samples were found to be well within the limits.

### Surface Water

3 Surface water sampling locations were selected within 10 km study area. The locations of surface water sampling with its distance and directions w.r.to the project site given in **Table 15** and the locations of Surface water sampling are shown in **Figure 11**. 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:

**Table 15: Surface Water Sampling Locations**

S. N.	Code	Location	Distance w.r.t Project	Direction w.r.t Project
1	SW1	Ghanewadi Talav	4.0 km	NE
2	SW2	Boldi River – Near Keligavhan Village, Dist.: Jalna - Upstream	5.5 km	NW
3	SW3	Boldi River – Near Rajewadi Village, Dist.: Jalna - Downstream	5.0 km	W



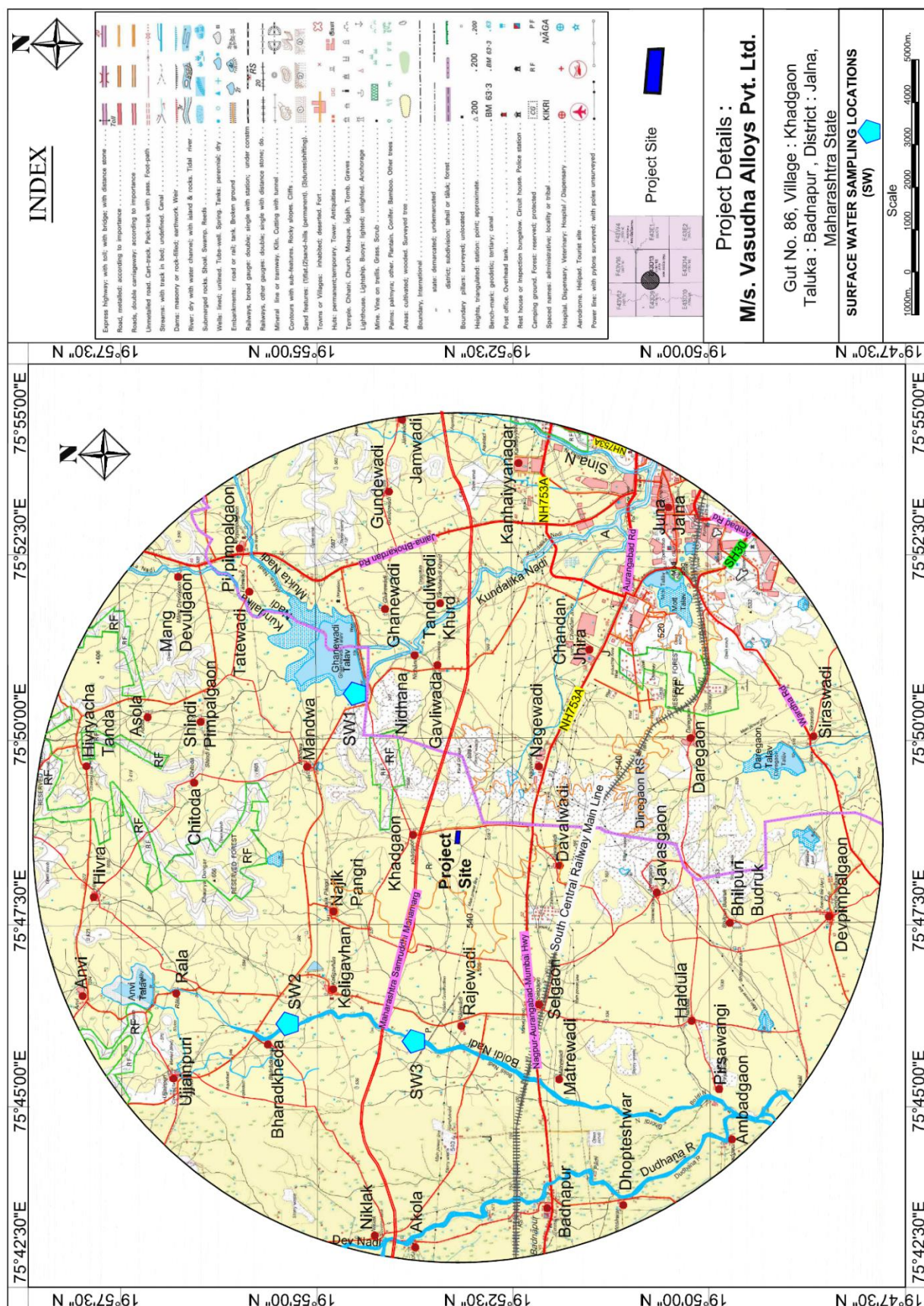


Figure 11: Surface Water Sampling Locations

### Conclusion:

- pH of the surface water samples collected was in the range of 7.5 – 7.6.
- Total Dissolved Solids in the samples was in the range of 345 - 374 mg/l.
- Total Hardness was found to vary between 140 - 180 mg/l.
- Chloride's concentration was found to vary between 65 - 110 mg/l.
- Fluoride concentration was found to <0.5 mg/l.
- Sulphates concentration was found to vary between 36 - 53 mg/l.
- Heavy metal concentrations in all samples were found to be well within limits.

### 3.5 Soil Quality

The soil samples were collected from 8 sampling locations within an area of 10 km radius around the project for analysis of the physico-chemical characteristics of the soil quality. The locations of soil sampling stations are given in **Table 16** and the Sample location map is shown in **Figure 12**.

**Table 16: Soil Sampling Locations**

S. N.	Code	Location	Distance w.r.t Project	Direction w.r.t Project
1	S1	Gut No. 86, Village: Khadgaon, Taluka: Badnapur, District: Jalna	-	-
2	S2	Khadgaon Village	1.0 km	N
3	S3	Nidhona Village	4.0 km	NE
4	S4	Kanhaiyyanagar	8.5 km	NE
5	S5	Nagewadi Village	2.5 km	SE
6	S6	Davalwadi Village	2.5 km	S
7	S7	Rajewadi Village	4.0 km	W
8	S8	Keligavhan Village	5.0 km	NW



Sri Sai Manasa Nature Tech (P) Ltd.



### Figure 12: Soil Sampling Locations



### Conclusion:

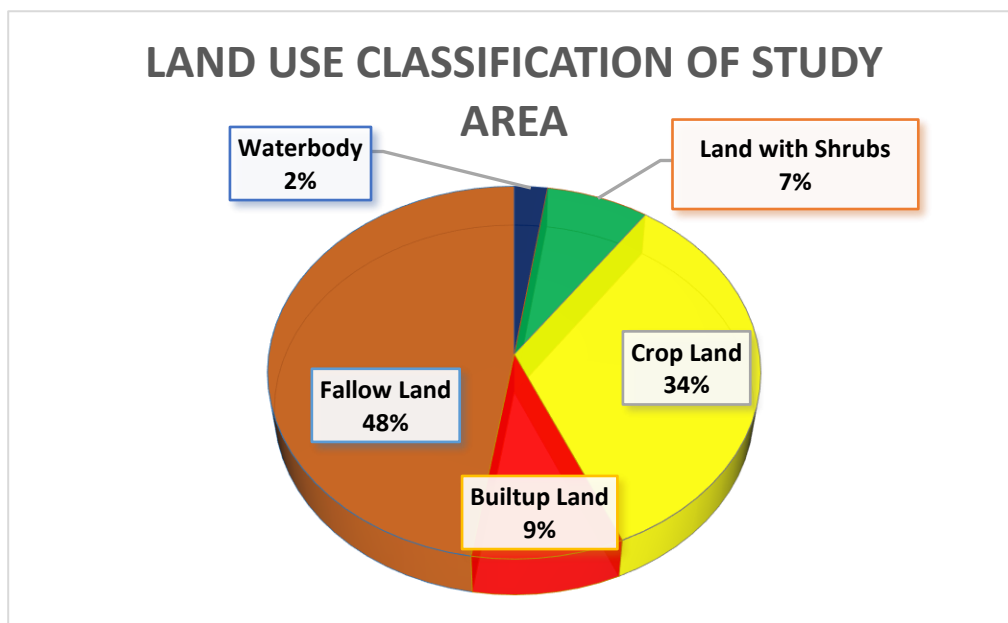
- pH of the soil samples was found to be in the range of 6.9 – 8.1
- Organic content of the soil samples was found to be medium exhibiting in the range of 1.32 % - 1.72 % and average fertility
- Soils in the area were found to be Silty Clay Loam in texture with sand percentage in the range between 15 – 27 %, silt between 41 – 54 % and Clay 25 – 43 %.
- Conductivity was observed in the range of 130 – 780  $\mu\text{S}/\text{cm}$ .
- Bulk density was observed in the range of 1.1 – 1.4 gm/cc.

### 3.6 Land use Land Cover classification

The Land Cover classes and their coverage are summarized in **Table 17** and the same is shown in **Figure 13**.

**Table 17: Land use Pattern of the Study Areas**

S. N.	Land Use Class (Level-I)	Land use/Land cover Classes (Level – II)	Area (Sq. Km) 314	Area (%) 100
1	Forest	Land with Shrubs	23.26	07.41
2	Water bodies	Waterbody	07.48	02.38
3	Agricultural Land	Crop Land	105.67	33.65
		Fallow Land	149.01	47.46
4	Built-up Land	Built-up Land	28.58	9.10
		<b>Total</b>	<b>314.00</b>	<b>100.00</b>



**Figure 13: Pie Chart of Percentage Wise Availability Land Use Land Covers Classes**

### 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 18**.

**Table 18: Population Details**

S. N.	Particulars	0-10 km
1	Number of households	67572
2	Male population	183594
3	Female population	172706
4	<b>Total population</b>	<b>356300</b>

5	SC population	48768
6	ST population	5267
7	Average household size	5.3
8	% Of males to the total Population	51.53
9	% Of females to the total population	48.47
<b>10</b>	<b>Total Literates</b>	<b>244662</b>
11	Male Literates	135681
12	Female Literates	108981

#### 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 19 (A) and Table 19 (B)**.

**Table 19 (A): Incremental Emission Load due to Construction Activity Contributing in Existing Baseline Values due to Point Source**

S.N.	Sampling Location Code & Name	PM <sub>10</sub> (ug/m <sup>3</sup> )			SO <sub>2</sub> (ug/m <sup>3</sup> )			NO <sub>x</sub> (ug/m <sup>3</sup> )		
		BV	IV	RV	BV	IV	RV	BV	IV	RV
1	*A1	77.4	0.85	78.25	19.4	1.14	20.54	23.8	0.92	24.72
2	A2	57.3	-	57.3	15.9	-	15.9	19.0	-	19.0
3	A3	58.8	-	58.8	17.8	-	17.8	20.2	-	20.2
4	A4	62.0	-	62.0	13.7	-	13.7	18.0	-	18.0
5	A5	59.6	-	59.6	12.7	-	12.7	18.0	-	18.0
6	A6	72.2	-	72.2	12.9	-	12.9	17.1	-	17.1
7	A7	68.9	-	68.9	14.2	-	14.2	19.6	-	19.6
8	A8	64.9	-	64.9	14.1	-	14.1	17.9	-	17.9
<b>NAAQS Standards</b>		<b>100 (24 hourly)</b>			<b>80 (24 hourly)</b>			<b>80 (24 hourly)</b>		

**\*\* Note: BV- Baseline Value, IV- Incremental Value, RV- Resultant Value**

**Table 19 (B): Incremental Emission Load due to Construction Activity Contributing in Existing**

**Baseline Values due to Line Source**

S.N.	Sampling Location Code & Name	PM <sub>10</sub> (ug/m <sup>3</sup> )			SO <sub>2</sub> (ug/m <sup>3</sup> )			NO <sub>x</sub> (ug/m <sup>3</sup> )			CO (mg/m <sup>3</sup> )		
		BV	IV	RV	BV	IV	RV	BV	IV	RV	BV	IV	RV
1	*A1	77.4	0.55	77.95	19.4	0.20	19.6	23.8	0.33	24.13	0.008	0.82	0.83
2	A2	57.3	-	57.3	15.9	-	15.9	19.0	-	19.0	<0.1	-	<0.1
3	A3	58.8	-	58.8	17.8	-	17.8	20.2	-	20.2	<0.1	-	<0.1
4	A4	62.0	-	62.0	13.7	-	13.7	18.0	-	18.0	<0.1	-	<0.1
5	A5	59.6	-	59.6	12.7	-	12.7	18.0	-	18.0	<0.1	-	<0.1
6	A6	72.2	-	72.2	12.9	-	12.9	17.1	-	17.1	<0.1	-	<0.1
7	A7	68.9	-	68.9	14.2	-	14.2	19.6	-	19.6	<0.1	-	<0.1
8	A8	64.9	-	64.9	14.1	-	14.1	17.9	-	17.9	<0.1	-	<0.1
NAAQS Standards		100 (24 hourly)			80 (24 hourly)			80 (24 hourly)			4 (1 Hour)		

Note: BV- Baseline Value, IV- Incremental Value, RV- Resultant Value

### 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 one stack is provided for existing operational plant and two more stacks having height of 30 m will be installed for proposed expansion project along with 3 stacks of DG Set (1 existing and 2 Proposed).
- All trucks moving from 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 295 KLD. Required water quantity will be sourced from private water tankers/ground water and domestic water is proposed to use from ground water after obtaining CGWA permission for the same. 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 (10.8 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: 0.93 Ha

Total plant should be planted as per SEIAA, Maharashtra recommendation

= 0.93 Ha. x 2,000 = 1,860 nos. of trees required.

In existing plant area, 33% (0.93 Ha.) area will be developed as a greenbelt. Total 1,860 nos. of saplings will be planted in proposed greenbelt. For development of greenbelt, Rs. 28 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 20**.

**Table 20: Solid & Other Waste Generation Details**

S. N.	Particular	Existing Unit	Proposed Expansion	Total Quantity
1	Induction Furnace Slag	NIL	60.0 TPD	60.0 TPD
2	Coal Ash	0.5 TPD	0.5 TPD	1.0 TPD
3	Burnt Steel/ Mill Scale	0.4 TPD	4 TPD	4.4 TPD
4	APC Dust	0	4 TPD	4 TPD

1. Generated slags will be used for own brick manufacturing unit.
2. Used and waste oil will be sold to authorized vendor.
3. Dust collected in bag filters will be sale to authorized recycler.
4. Fuel Consumption

Fuel consumption details for the proposed expansion project are given in **Table 21**.

**Table 21: Fuel Consumption Details**

Fuel Requirement	Existing Quantity	Proposed Quantity	Total Quantity
Coal	10 MTD	10 MTD	20 MTD
HSD	25 lit./hr.	100 lit./hr.	125 lit./hr.

#### 4.6 Environment Management Plan

Details of environment management plan is given in **Table 22**.

**Table 22: EMP Budget**

S. N.	Item	Capital Cost (Rs. In Lakhs)	Recurring Cost (Rs. In Lakhs)
1	Air Pollution Control	165.00	5.0
2	RWH & Water Pollution Control	50.00	2.0
3	Noise Pollution Control	10.00	1.0
4	Environment Monitoring and Management	15.00	2.34
5	Occupational Health	5.00	1.0
6	Greenbelt Development	28.00	5.0
7	Safety Management	5.00	1.0
8	Laboratory and Chemicals	2.00	1.0
9	Renewable Energy	15.00	1.0
10	DG SET (2 x 500 KVA)	30.00	1.0
	<b>Total Amount</b>	<b>325.00</b>	<b>20.34</b>
	<b>Total Amount (Capital Cost &amp; Recurring Cost)</b>	<b>345.34 Lakhs</b>	
	<b>Total Amount (Capital Cost &amp; Recurring Cost)</b>	<b>3.45 Crores</b>	

#### 4.7 Corporate Environment Responsibility

M/s. Vasudha Alloys Pvt. Ltd. earmarked Rs. 112.50 lakhs towards Corporate Environment Responsibility (CER) as per Office Memorandum of MoEF&CC. Total project cost of the proposed expansion activity will be Rs. 150 Crores. CER is Calculated (@ 1.0 % of additional Capital Cost of the expansion project) as per MOEFCC OM Dated: 1<sup>st</sup> May 2018. Fund Allocation for the CER as per Office Memorandum is given in **Table 23**. 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 24**.

**Table 23: 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 24: Proposed CER Activities**

S. N.	Planned Activities under CER as per specific needs	Amount in Rs. Lakhs
1	<b>Community Health Improvement</b> <ul style="list-style-type: none"> <li>Sanitary facilities for project surrounding villages</li> </ul>	20.00
2	<b>Community Education Facilities</b> <ul style="list-style-type: none"> <li>Providing desktop computers to schools</li> </ul>	10.00
3	<b>Infrastructural Development</b> <ul style="list-style-type: none"> <li>Maintenance/ Repair of Hand Pumps/ Bore wells</li> </ul>	30.00
4	<b>Afforestation Programs</b> <ul style="list-style-type: none"> <li>Plantation of trees in villages road side/ Panchayat House/ Public Health Center/ schools</li> </ul>	30.00
5	<b>Community Welfare Activities</b> <ul style="list-style-type: none"> <li>Solar Street Lights for common community area and village main approach roads as per the instruction of respective Gram Panchayat</li> </ul>	22.50
<b>Total Amount (Rs. in Lakhs)</b>		<b>112.50</b>
<b>Total Amount (Rs. in Crores)</b>		<b>1.13</b>



## **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. Greenbelt development within the plant and 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.

\*\*\*\*\*