PRE-FEASIBILITY REPORT

of

Steel Manufacturing Unit by Replacing Existing Induction Furnaces and Enhance production capacity from 45,000 MTPA to 1,40,000 MTPA

by

M/s Vardhman Ispat Udyog

Located at

Village Bathri, Dist. Una, State-Himachal Pradesh

PREPARED BY

SHIVALIK SOLID WASTE MANAGEMENT LIMITED

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1 EXECUTIVE SUMMARY

1.1 Introduction

M/s Vardhman Ispat Udyog (VIU), established in 2005 is a Partnership firm promoted by Mr. Pradeep Garg and Mr. Subodh Kumar. VIU is an authorized distributor of Kamdhenu Ispat Limited's (KIL) steel product in Panjab. It also supplies the products in Himachal Pradesh. The firm has a dealer network of 400 dealers through which the distribution is done. As per the arrangement between VIU & Kamdhenu, any sale of Kamdhenu TMT (retail or institutional) is being routed through VIU only in Punjab.

The Vardhman Ispat Udyog is undergoing backward integration with the proposed purchase of 2 plants (Land & Building, Plant & Machinery, Stocks & Receivables) namely; M/s H.N. Steel Casting Pvt. Ltd and S.R. Steel in Village Bathri, Distt. Una (HP) along with the Land of Mr. Rakesh Kumar. Vardhman Ispat Udyog has purchased the said assets as an ongoing unit.

The Vardhman Ispat Udyog would be foraying into manufacturing of TMT Bars under 'Kamdhenu Nxt' & 'Kay2' brands of Kamdhenu Limited and Kamdhenu Concast Limited respectively. The TMT bars manufactured by Vardhman Ispat Udyog would be sold through the existing dealer network of Vardhman Ispat Udyog and Vardhman Enterprises.

The Vardhman Ispat Udyog has signed the Agreement to Sell with M/s H.N Steel casting Pvt. Ltd and M/s S.R Steels in village Bathri, Distt. Una (HP) along with the land of Mr. Rakesh Kumar and making the payment as advance for purchase of 2 plants (land & building, Plant & Machinery, Stocks & receivables) in village Bathri, Distt. Una for Manufacturing of TMT Bars.

The aforesaid plants are in running condition. The TMT bar being manufactured by the firm is of the grades: Fe 415, Fe 500 and Fe 550; Fe415D, Fa 520D, Fe 550D and of sizes ranging from 8 mm to 32 mm. The installed capacity of the purchased plants is 45,000 MTPA which would be enhanced to 1,40,000 MTPA post Capacity enhancement. The Plant runs in 2 shift of 10 hours each.

The industrial unit M/s H.N Steel casting Pvt. Ltd & M/s S.R Steels has valid "Consents to operate" for the existing setup and same is valid up to date 31.03.2019 & 31.03.2023

respectively. The proposed capacity enhancement will be done in the existing plant premises only.

As per G.O.I Notification dated 14/09/2006 any change in product/capacity enhancement required Environmental Clearance. Accordingly, they have to submit Form-I along with Pre-Feasibility Report and other relevant documents for getting Environmental Clearance. As per EIA notification, 2006 and its subsequent amendments, the project falls under Category "A" (interstate boundary fall within 1 km from the project site) and will be appraised by EAC, MOEF & CC, New Delhi. This Prefeasibility report has, therefore, been prepared to assess the likely impact of the proposed capacity enhancement on various factors which may be affected with the implementation of the programme and to suggest remedial / precautionary measures, if any.

Water for construction and domestic purpose will be drawn from borewell. Approximately 31 KLD (21 KLD + 10 KLD) water will be used for industrial and domestic purposes respectively. Total Power load around 9925 KW to run the additional plant & machinery during Construction and Operational Phase. Expected source is Himachal Pradesh Power Corporation Ltd. Total Plot Area is around 27078.0 Sq. m.

1.2 Synopsis of the Report

The pre-feasibility report includes a brief introduction of the company, need and justification of the project, process description, required and available resources, proposed Environment Management Systems, land-use and proposed infrastructure, project schedule and cost estimate and proposed Terms of reference for conducting the EIA studies. M/s Vardhman Ispat Udyog has engaged M/s Shivalik Solid Waste Management Limited as their Environmental Consultant to conduct the EIA studies for obtaining Environmental Clearance (EC) for the proposed Project.

2 INTRODUCTION OF THE PROJECT/BACKGROUND INFORMATION

2.1 Identification of the Project and Project Proponent

M/s Vardhman Ispat Udyog has signed the agreement to Sell with M/s H.N Steel Casting Pvt. Ltd and M/s S.R Steels in village Bathri, Distt. Una (HP) along with the land of Mr. Rakesh Kumar in village Bathri, Distt. Una for Manufacturing of TMT Bars.

The proponent plans to replace existing induction furnace capacity of 4 T & 6 T to new furnace of 2x10 T each based on the latest technology. However, existing rolling mill will also exist after merging. The new furnace is power efficient leading to saving of 50 units of electricity (Reduction from 600 units to 550 units). The details of the project are given in Table below-

Table 2-1: Project Details

S. No	Parameters	Description
1	Identification of project	Project falls under Metallurgical Industries (secondary metallurgical processing) Item 3(a) of the schedule of EIA notification of Sept 14, 2006 issued by MOEF & CC.
2	Project Proponent	M/s Vardhman Ispat Udyog
3	Brief description of nature of the project	The proposed project is for the capacity enhancement of manufacturing unit by replacing existing induction furnace (4 T & 6 T to 2x10 T each), Rolling Mill and enhance production capacity 45,000 MTPA to 1,40,000 MTPA.
4	**Salient Features of the Project**	
4.1	Proposed plant capacity	45,000 MTPA to 1,40,000 MTPA
4.2	Total Plot Area	Total Plot Area –27078.0 Sq.m.
4.3	Location	Village- Bathri, Distt. Una, State-Himachal Pradesh
4.4	Water requirement	Water for construction and domestic purpose will be drawn from Borewell.

S. No	Parameters	Description
		Approximately, 31KLD (21 Industrial + 10 Domestic) water will be required after capacity enhancement.
4.5	Source of water	Borewell
4.6	Wastewater	At present, 3.2 KLD of wastewater is being generated from the project which is being treated in existing septic tank. Water is being used for cooling purpose and same is being reused within the plant premises after neutralization and addition of makeup water. After merging, 8 KLD of wastewater will be generated which will be treated in proposed STP of 10 KLD capacity.
4.7	Man Power	After merging, total 184 workers will be there, out of which, 14 will be residing within the project premises.
4.8	Electricity/Power requirement	At present, 6398 KW of power load is available. After merging, electrical power will be 9925 KW. **Source:** Himachal Pradesh State Electricity Board. (HPSEB). In case of power failure, existing DG set of 125 KVA is there & after merging, DG sets of 125 & 250 KVA will be provided.
4.9	Alternative site	The proposed addition will be established in the existing plant premises only.
4.10	Land form, Land use and land ownership	Private land, owned by M/s. Vardhman Ispat Udyog.
5.0	Project cost	The estimated cost of the Project is approximately Rs. 3038.66 Lacs.

2.2 Brief Description of Nature of the Project

Installed Capacity of Purchased plant is 45,000 MTPA which would be enhanced to 1,40,000 TPA. The existing setup included an induction furnace having capacity of 4T & 6 T

which would be replacing two new furnaces 10 T each based on latest technology at Village, Bathri, Distt. Una, (HP).

2.3 Need for the Project and Its Importance to the Country and or Region

India was the world's third-largest steel producer in 2017. The growth in the Indian steel sector has been driven by domestic availability of raw materials such as iron ore and cost-effective labour. Consequently, the steel sector has been a major contributor to India's manufacturing output.

The Indian steel industry is very modern with state-of-the-art steel mills. It has always strived for continuous modernization and up-gradation of older plants and higher energy efficiency levels.

Indian steel industries are classified into three categories such as major producers, main producers and secondary producers.

2.4 Demand –Supply Gap

India's crude steel output grew 5.87 per cent year-on-year to 101.227 million tonnes (MT) in CY 2017. Crude steel production reached 93.183 MT during April- February 2017-2018.

India's finished steel export rose 102.1 per cent to 8.24 MT, while import fell by 36.6 per cent to 7.42 MT in 2016-17. Export and import of iron and steel stood at 14.6 MT and 13.1 MT during April-February 2017-18, respectively.

Huge scope for growth is offered by India's comparatively low per capita steel consumption and the expected rise in consumption due to increased infrastructure construction and the thriving automobile and railways sectors.

2.5 Employment Generation (Direct and Indirect) Due to Project

Total manpower of the project after merging would be around 184. During Construction phase, the labors and workers will be hired from nearby areas.

3 PROJECT DESCRIPTION

3.1 Type of Project

M/s Vardhman Ispat Udyog has signed the Agreement to Sell with M/s H.N Steel casting Pvt. Ltd and M/s S.R Steels. The aforesaid plants are in running condition. The TMT bar being manufactured by the firm is of the grades: Fe 415, Fe 500 and Fe 550; Fe415D, Fa 520D, Fe 550D and of sizes ranging from 8 mm to 32 mm. The installed capacity of the purchased plants is 45,000 MTPA which would be enhanced to 1,40,000 MTPA post Capacity enhancement. The Plant runs in 2 shift of 10 hours each.

Salient feature of the plant is given in Table below.

Table 3-1: Salient Features of the Project

S. No.	Details	Existing	After Merging
1.	**Induction Furnace**	HN : IFs of 4 TPH and 6 TPH SR : Rolling Mill	2 IFs of 10 TPH each + Rolling Mill
2.	**Production Capacity**	H N: 18,000 MT/Annum SR: 27,000 MT/annum	1,40,000 MT/annum
3.	**Raw materials**	47,250 MT/annum	1,47,000 MT/annum
4.	**Products**	HN: Ingots & castings SR: TMT Bars	TMT Bars
5.	**Manpower**	84 workers	Total 184 workers, out of which 14 will be residing within the project premises
6.	**Total Water Demand**	10 KLD	31 KLD
7.	**Cooling Water Demand**	6 KLD	21 KLD
8.	**Domestic water Demand**	4 KLD	10 KLD
9.	**Wastewater generated**	3.2 KLD (Treated in Septic tank)	8 KLD (It will be treated in proposed STP of 10 KLD capacity)
10.	**Power Load**	HN: 4,398 KW SR: 2,000 KW	9,925 KW
11.	**DG sets**	1 DG set of capacity 125 KVA	2 DG sets of capacity 125 & 250 KVA each

12.	**Domestic Solid Waste**	17 kg/day	40 kg/day
13.	**Slag**	1,890 MT/annum	5,880 MT/annum

3.2 Location

The project is located at Village Bathri, Dist. Una, State-Himachal Pradesh. The coordinates is given in Table below-

Table 3-2: Coordinate

Latitude	31°19'09.6"N
Longitude	76°17'28.3"E

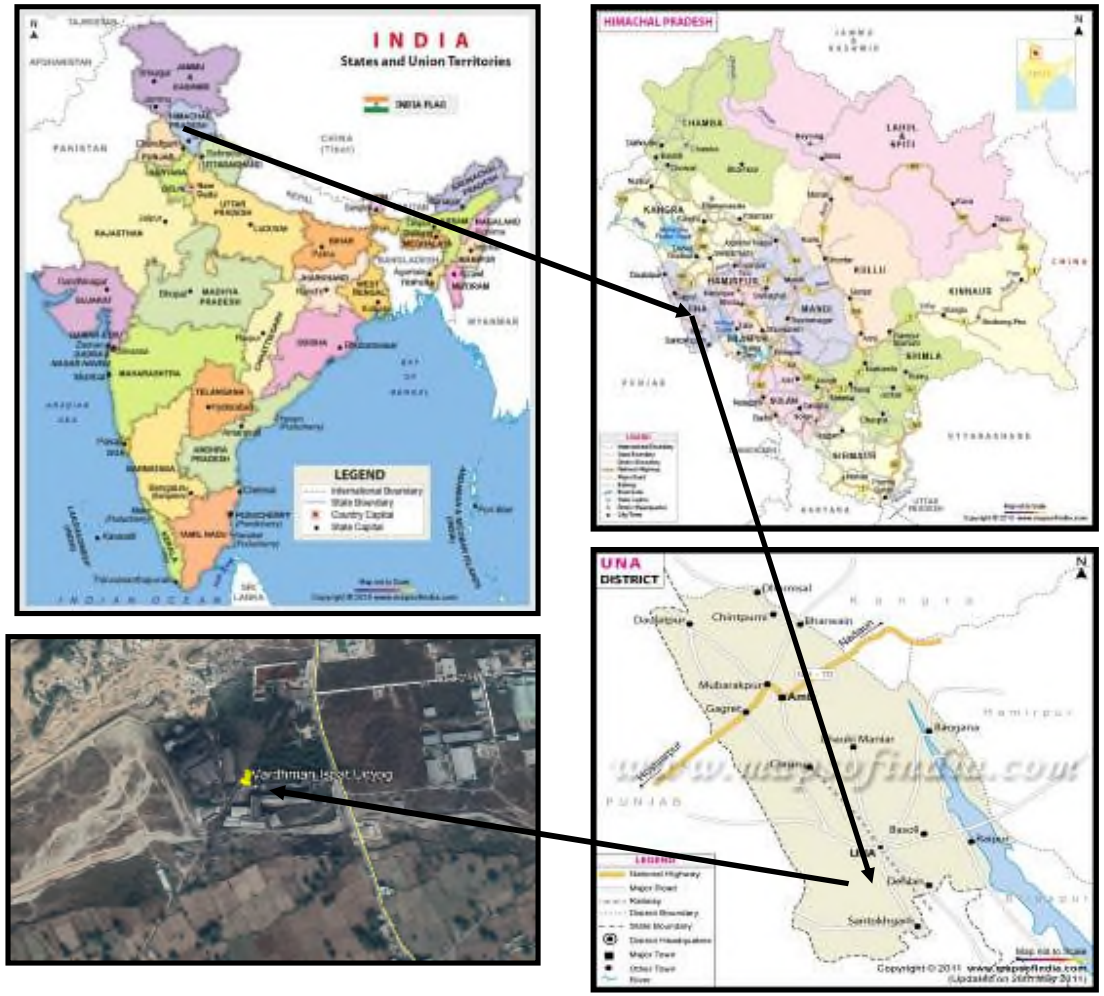

Figure 3-1: Location Map of the Project Site

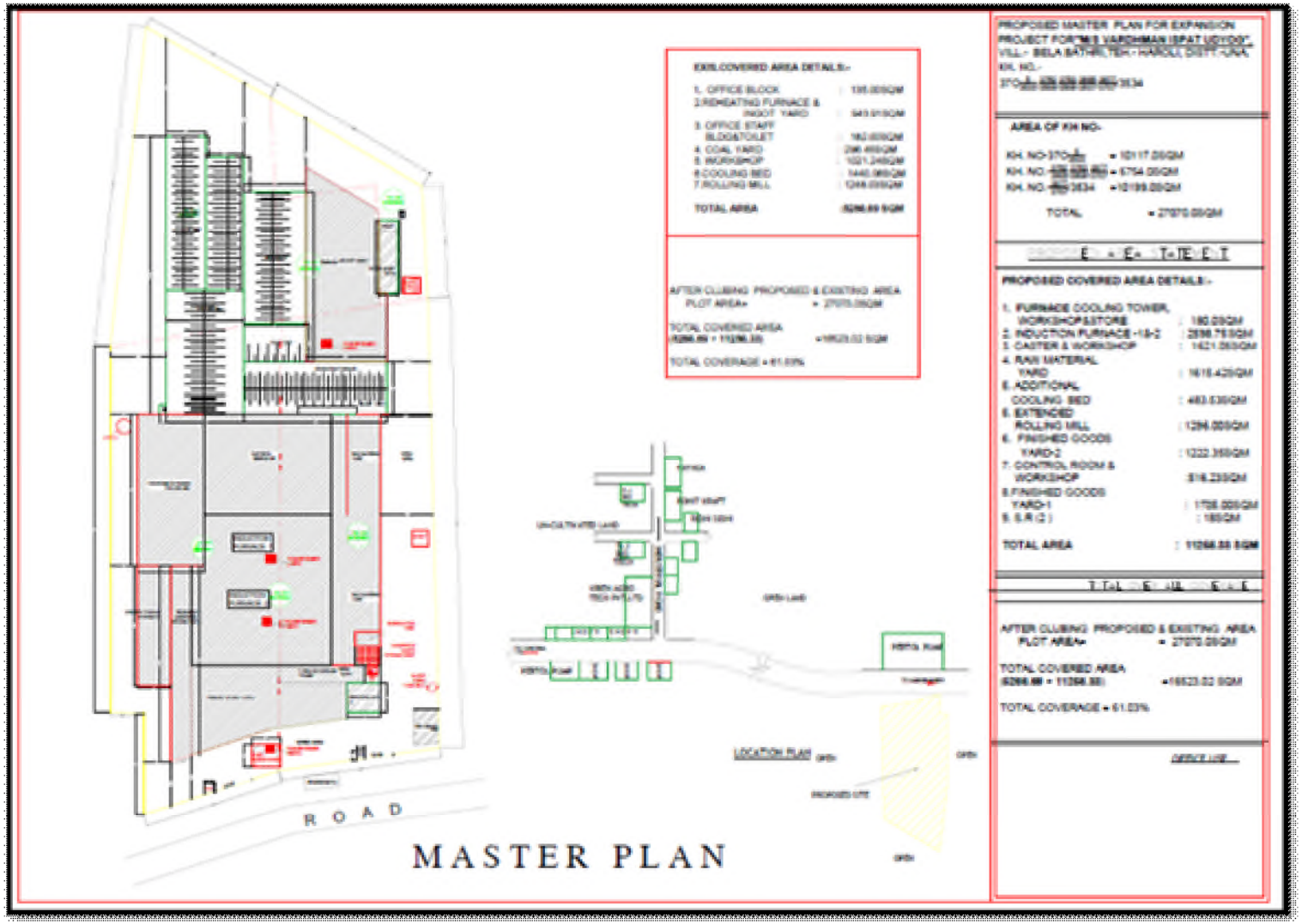

Figure 3-2: Plant Layout

3.3 Details of Alternate Sites

No alternate site is examined the details of land is as follows-

- **Land requirement and availability**:

  Land is already available in plant premises at Village Bathri, Dist. Una, State-Himachal Pradesh.

- **Land ownership Details**:

  Land is already belongs to M/s H.N Steel casting Pvt. Ltd and M/s S.R Steels in village Bathri, Distt. Una (HP) along with the land of Mr. Rakesh Kumar in village Bathri, Distt. Una. Vardhman Ispat Udyog purchased said assets as an ongoing unit.

3.4 Size and Magnitude of operation

The project of M/s Vardhman Ispat Udyog is an existing industrial unit at M/s H.N Steel casting Pvt. Ltd and M/s S.R Steels in village Bathri, Distt. Una (HP). The aforesaid plants are in running condition. The TMT bar being manufactured by the firm is of the grades: Fe 415, Fe 500 and Fe 550; Fe415D, Fa 520D, Fe 550D and of sizes ranging from 8 mm to 32 mm. The installed capacity of the purchased plants is 45,000 MTPA which would be enhanced to 1,40,000 MTPA. The existing setup included an induction furnace 4T & 6 T which would be replacing two new furnaces of 10 T each based on latest technology.

Table 3-3: Proposed Machinery

Sr. No	Machinery	Quantity
1.	Steel Frame induction furnace of 3500 KW/10 T	1
2.	Furnace Transformer	1
3.	ETMC 1x with secondary Automation	1
4.	PDLM of 10 MT	1
5.	Steel frame induction furnace of 3500 kw/10T	1
6.	Furnace Transformer	1
7.	EOT Crane 35/15 MT	2
8.	EOT Crane 25/10 MT	1

3.5 Project Description with Process Details

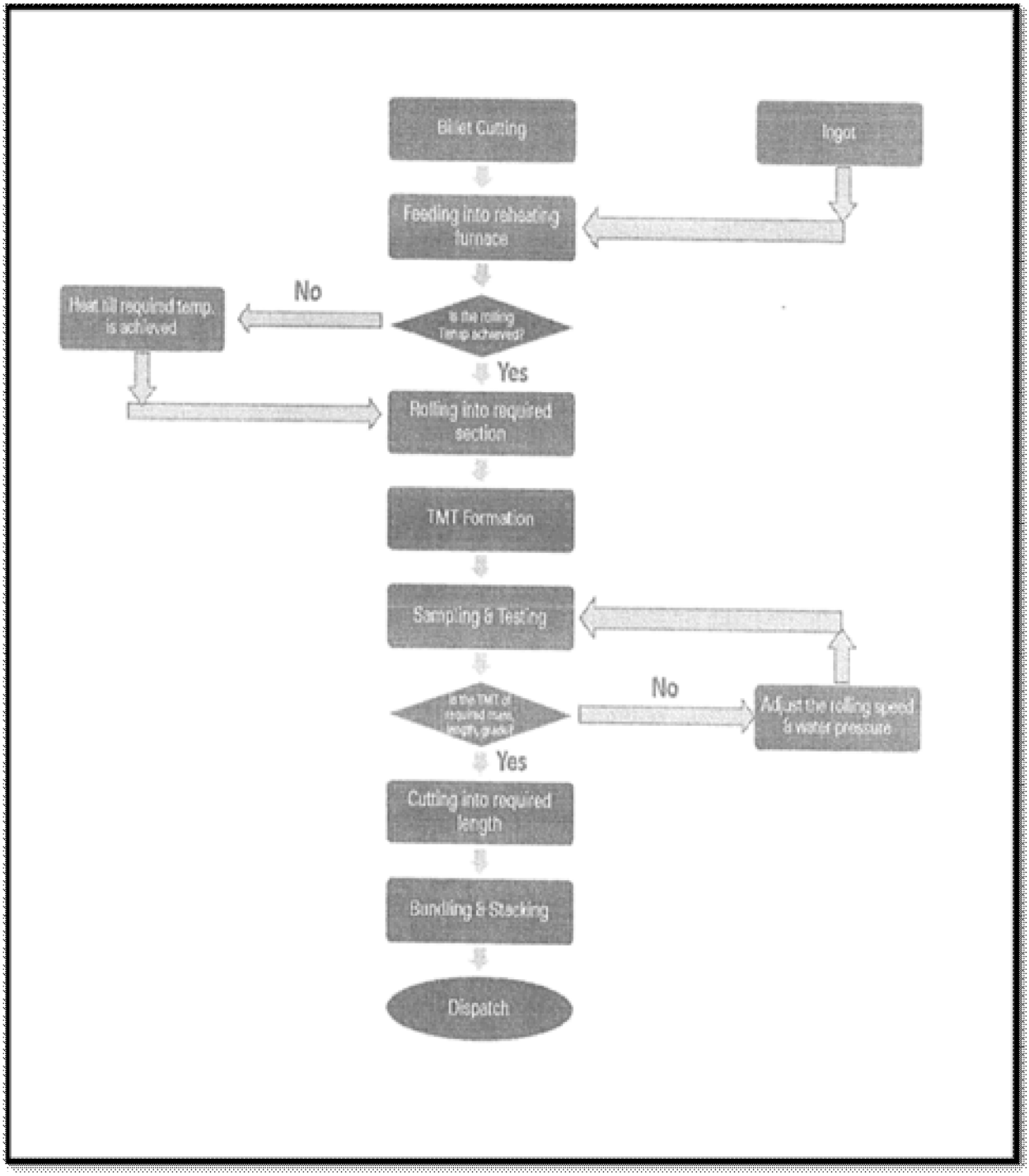

Figure 3-3: Existing Manufacturing Process Flow Diagram

Billets /Ingots are being manufactured in-house using scrap in the furnace of HN steel casting as well as purchased from Sham Steels, Orissa. These billets /ingots are then reheated before they are manually fed to the rolling mill for conversion into TMT Rebars.

In the proposed manufacturing process, hot charging lines (continuous casting) will be installed wherein billets are directly transferred to rolling mill for conversion into TMT Rebars. Such process is expected to result in substantial cost savings (~INR 2000/Tonnes) as the billet is not required to be reheated.

Capacity enhancement of Existing Unit

Two new furnaces of 10 Tonne each based on latest technology each would be replacing the old furnaces of 4T & 6 T. The new furnace would be power efficient leading to saving of 50 units of electricity (reduction from 600 units to 550 units) for every tonne of TMT manufactured. The new furnace would also reduce the processing time for manufacturing of billets/ingots by half an hour. (Reduction from 2 hours to 1.5 hours)

3.5.1 Induction furnace

A coreless induction furnace operates on a similar principle to a transformer, i.e., the induction coil acts as primary coil, having many turns, and the charge acts as a secondary coil, with only as single turn. When an alternating current is applied to the induction (primary) coil of a furnace, a significantly larger current is induced in the metallic charge materials. The resistance to the passage of induced current within the furnace charge causes the charge to heat up until it eventually melts. Once the metal is molten, the magnetic field generated creates a stirring action in the bath, producing both homogenisation of the chemical composition and assimilation of any bath additions. Electrical energy at 11 kV (3-phase) is converted to 1250 V, through a transformer. It is further subjected to a 3-phase rectifier and inverter system which converts the power to single phase, high voltage-high frequency. The frequency converter amplifies the frequency from 50 Hz to 500 Hz. This power is applied to furnace coil to generate heat.

3.5.2 Source of Pollution and it's Control

A) Flue Gas management

The flue gases generated during melting of scrap are the major source of air pollution. Quality and quantity of flue gases mainly depends upon type of Scrap used in Furnace, i.e. degree of contamination in the Scrap. These flue gases need proper treatment for removal of dust particles before being discharged into the atmosphere. Major pollutants generated in the process will be Carbon Dioxide, Carbon Monoxide, Suspended dust (PM 10, PM 2.5, Heavy metals like As, Cr, Pb, Cd, Zn & Mn), Sulphur Dioxide (traces), Oxides of Nitrogen (in low concentration, depending on the temp of the process) and Emissions from DG sets. Currently the Air Pollution Control Device (APCD) unit with cyclone & bag filters is installed at the facility & its capacity will be increased in accordance with the proposed capacity enhancement to control the emissions within permissible limit will be let-out through stack.

B) Hazardous Waste Management

The APCD dust from Bag filters as well as used oil is the hazardous waste generated from the project which are stored and transported to TSDF.

3.6 Green Belt

Green belt will be developed as per CPCB guidelines. Plants of the various species will be planted in the plant and peripheral areas of the project site.

3.6.1 Selection Criteria of plant species for Green Development Plant

The selection of plant species for the development depends on various factors such as climate, elevation and soil. Area falls under the tropical region and thus the plants that area adapted to this condition should be selected. The plant should exhibit following characteristics in order to be selected for plantation.

1. The species should be fast growing and providing optimum penetrability.
2. The species should be wind firm and deep rooted
3. The species should form a dense canopy.
4. As far as possible, the species will be locally available
5. Species tolerances to air pollutants like PM, SO_2, and NOx should be preferred.

6. The species should be permeable to help create air turbulence and mixing within the belt.
7. There should be no large gaps for the air to spill through.
8. Tree with high foliage density, leaves with larger leaf area and hairy on both the surface.
9. Ability to withstand conditions like inundation and drought.
10. Soil improving plants (Nitrogen fixing, rapidly decomposable leaflitter).
11. Attractive appearance with good flowering and fruit bearing.
12. Bird and insect attracting tree spacing

3.7 Resource optimization/Recycling and reuse

Various steps shall be taken for recycle/ reuse in the proposed project is as mentioned below:

- Waste water generated shall be mainly from cooling and same shall be reused within the plant premises by neutralizing.
- APCD Dust from Bag filters are hazardous materials generated on site, will be stored and transported to TSDF site.

3.8 Availability of water its source, Energy/Power requirement and source

Water for construction and domestic purpose will be drawn from borewell. Approximately 31 KLD water will be used for industrial and domestic purposes.

Existing Power load of 6398 KW & additional 3527 KW will be used to run plant & machinery during construction and operational phase.

Source: Himachal Pradesh State Electricity Board (HPSEB). In case of power failure, existing DG set of 125 KVA is there & after merging, DG sets of 125 & 250 KVA will be provided.

3.9 Quantity of wastes to be generated (liquid and solid) and scheme for their Management/disposal

Solid waste management will be done as per MSW 2000 Rules & amended thereof. The APCD dust from Bag filters as well as used oil is the hazardous waste generated from the project which are stored and transported to TSDF. Slag is being generated from the unit which is being disposed off in low lying areas. After merging, 5,880 MT/annum of slag will be generated.

At present, 3.2 KLD of wastewater is being generated from the project which is being treated in existing septic tank. Water is being used for cooling purpose and same is being reused within the plant premises after neutralization and addition of makeup water.

After merging, 8 KLD of wastewater will be generated which will be treated in proposed STP of 10 KLD capacity.

4 SITE ANALYSIS

4.1 Connectivity

The Plant site is located at Village Bathri, Tehsil Haroli & Dist. Una, Himachal Pradesh. The project site is adjacent to MDR-41. The soil of Una district is alluvial and grey brown podzolic. The project site is around 361 m above MSL.

The site is well connected by road and railways. The Nearest Town Santokhgarh located about 5 km from project site. The nearest railway station is Nangal Railway station about 9 km. The Nearest Airport is Ludhiana Airport about 61 km away from project site. The study area map is given in Figure below-

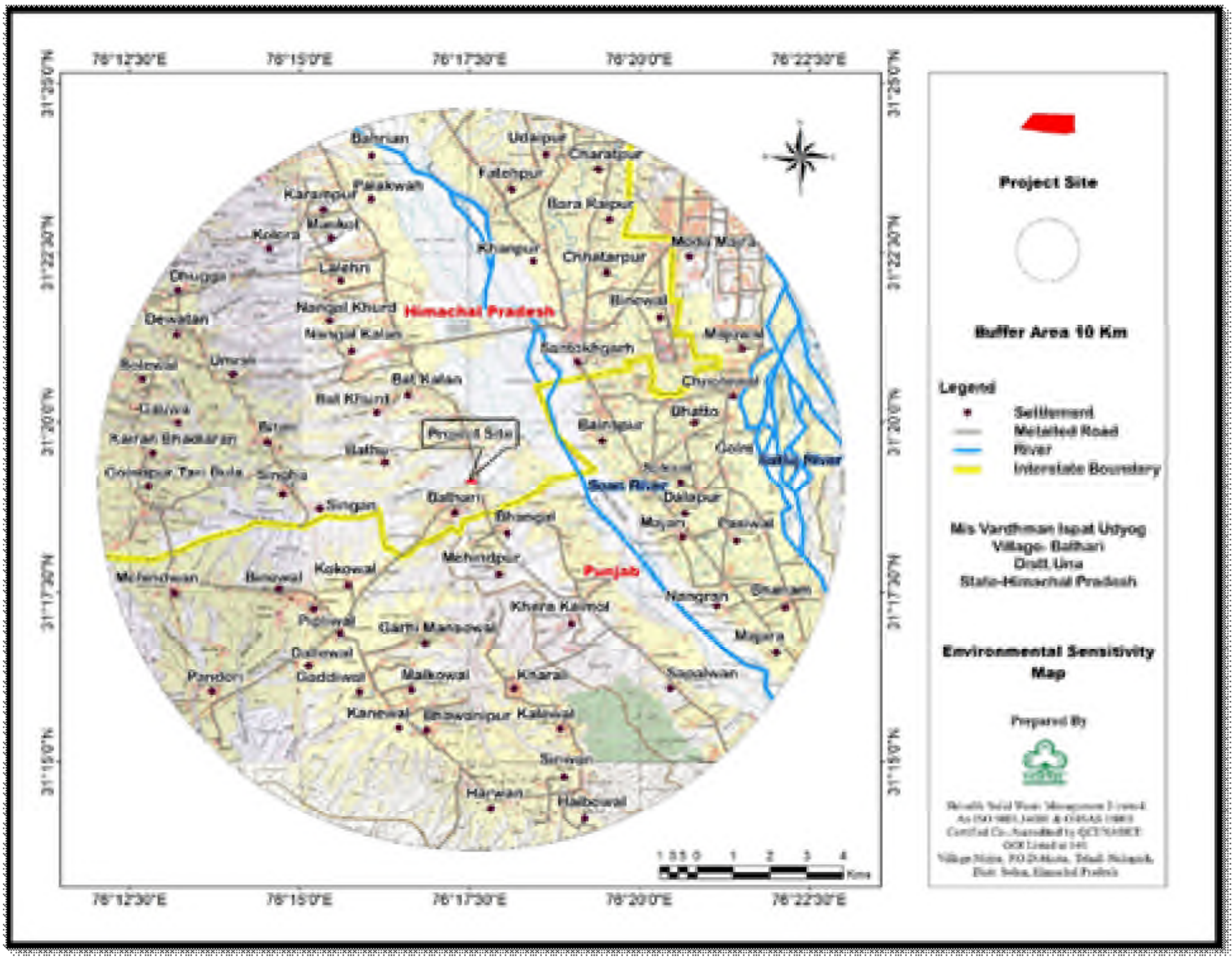

Figure 4-1: Map Showing 10 km Radius of Buffer Area around Project Location

4.2 Land Form, Land use and Land ownership

Land is already belongs to M/s H.N Steel casting Pvt. Ltd and M/s S.R Steels in village Bathri, Distt. Una (HP) along with the land of Mr. Rakesh Kumar in village Bathri, Distt. Una. Vardhman Ispat Udyog purchased said assets as ongoing unit. The land is alluvial flat plain, utilized for the cultivation, forest and industrial purposes.

4.3 Topography

Una district came into existence on 1st September 1972 and is situated in the southwestern part of the State of Himachal Pradesh. The district, with its headquarter at Una town, has a geographical area of 1540 Sq. km and covers 2.8 % area of the State. It lies between North latitude 31°18’00” & 31°55’00” and East longitude 75°55’00” & 76°28’00” and is covered by Survey of India degree sheet No.53A & 44M. Towards the north, it is bounded by Kangra

district, towards north and east by Hamirpur and Bilaspur districts respectively and towards south-west by the State of Punjab.

Administratively, the district has been divided into two sub-divisions (Una & Amb) and comprises of 4 tehsils [Una, Amb, Bangana, Haroli] and 1 sub-tehsil (Bharwain). Further, there are 5 CD blocks [Una, Amb, Gagret, Dhundla (Bangana) & Haroli]. There are 5 towns (Una, Mehtpur Badshera, Gagret, Santhokhgarh and Daulatpur), 758 inhabited villages, 56 uninhabited and 235 Gram Panchayats in the district. Una district is well developed in the industrial sector due to close proximity to Punjab state with Mehatpur, Gagret, Tahliwal & Amb as main industrial centers.

Climate:

Climate of the district is tropical to temperate in nature, as the terrain varies from plains to high hills. Temperature varies from minimum of 4°C in winter to maximum of 46°C in summer. The area receives rainfall during monsoon period, extending from June to September and also non-monsoon period (winter). The annual average rainfall in the area is about 1040 mm, with about 55 average rainy days. The winter season starts from November and continues till the middle of March. Thereafter, the mercury continues rising till the onset of Monsoon which starts from the last week of June and continues till the middle of September.

Geology:

The unconsolidated valley fill or alluvial formations, occurring in the valley area and semi-consolidated sediments belonging to Siwalik Group form aquifer system in the district. Porous alluvial formation, forms the most prolific aquifer system in the valley area, where as the sedimentary semi-consolidated formation form aquifer of low yield prospect.

In Una valley area, the ground water occurs in porous unconsolidated / alluvial formation (valley fills) comprising sand, silt, gravel, cobbles / pebbles etc., and forms prolific aquifer. Ground water occurs both under phreatic and confined/artesian conditions. Free flowing wells are also observed in the lower part of Soan river.

4.4 Existing Land Use pattern

The area under unique agro-climatic region of the country, bulk of the area under agricultural land is being used both for agricultural and horticultural activities. The existing land is used as industrial purposes. The land of the area is alluvial plain and well-developed area.

4.5 Existing Infrastructure

The infrastructure amenities available in the area denote the economic wellbeing of the region. The project area is connected with MDR 41. Educational facilities up to Senior School, College, Hospital & Banking facilities are available at Haroli as well as Santokhgarh about 12 and 5 kilometers away from the project area. The existing building comprise of rolling mill shed, Workshop shed &Competitive administrative block along at the existing premises.

4.6 Soil Classification

The soils of the state can broadly be divided into nine groups on the basis of their development and physico-chemical properties. These are: (i) alluvial soils, (ii) brown hill soil, (iii) brown earth, (iv) brown forests soils, (v) grey wooded or podzolic soils, (vi) grey brown podzolic soils, (vii) planosolic soils, (viii) humus and iron podzols (ix) alpine humus mountain speletal soils.

The soil found in the districts of Mandi, Kangra, Bilaspur, Una, Solan, Hamirpur and Sirmaur is generally brown, alluvial and grey brown podzolic.

Soil testing will be done and will be submitted at EIA (Baseline study) stage.

4.7 Social Infrastructure available

Schools, colleges, hospitals & healthcare centers, shops & bazaars, community centers etc. are all available on nearby area.

5 PLANNING BRIEF

5.1 Planning concept (type of industries, facilities, transportation etc.) Town and country, planning/ development authority classification

The Surrounding area and the related facilities are already developed hence no planning is envisaged. The nearby towns have the modern facilities.

5.2 Population Projection

There would not be any significant development/increase in the population of surrounding area. Workers for the proposed project will come from the local residents in the surrounding villages. There won't be any influx of people in the area due to proposed project.

5.3 Land use planning (breakup along with green belt etc.)

The open space inside the plant area will suitably landscape and covered with the vegetation of indigenous variety. Green Belt area will be developed as per the CPCB guidelines.

The proposed capacity enhancement and augmentation of the unit will be done within existing plant premises having total area around 27078.00 Sq.m. already acquired by the project proponent.

5.4 Assessment of infrastructure demand (physical and the social)

The proposed capacity enhancement and augmentation of project within well-developed industrial unit and all facilities/amenities like medical, educational, housing, transportation, communication, shopping etc. are available nearby places. Local workers will be employed for the construction during proposed capacity enhancement; no long-term infrastructure will be required.

5.5 Amenities/Facilities

Major basic facilities are available for the proposed project. Road, electricity, water, transportation facility etc. are well developed in the surrounding area. All the amenities related to project on the site will be installed.

6 PROPOSED INFRASTRUCTURE

6.1 Industrial area (processing area)

Site Infrastructure:

- The site already having administrative and site control office with latest equipment like computers, walkie-talkie & computerized weigh-bridge, printers, fax, Xerox machine, etc.
- Sufficient power load exists to meet the current requirement.
- Water for domestic purpose as well industrial cooling purposes will be drawn from borewell.

6.2 Green Belt

The main objective of the green belt is to provide a barrier between the plant and surroundings areas. Green belt will be developed according to CPCB guidelines.

6.3 Social Infrastructure

Schools, colleges, hospitals & healthcare centers, shops & bazaars, community centers, etc. are all available in nearby area.

6.4 Connectivity

The Plant site is located at Village Bathri, Tehsil Haroli & Dist. Una, Himachal Pradesh. The project site is adjacent to MDR-41. The soil of Una district is alluvial and grey brown podzolic. The project site is around 361 m above MSL.

The site is well connected by road and railways. The Nearest Town Santokhgarh located about 5 km from project site. The nearest railway station is Nangal Railway station about 9 km. The Nearest Airport is Ludhiana Airport about 61 km away from project site.

6.5 Water Management (Source and Supply of Water)

Water consumption for the unit will be as small as the requirement for the cooling system where water will be re-circulated in the closed circuit. About 31 KLD water will be required on daily basis out of which 10 KL is used for the domestic and same would be drawn from borewell.

6.6 Sewerage System

At present, 3.2 KLD of wastewater is being generated from the project which is being treated in existing septic tank. Water is being used for cooling purpose and same is being reused within the plant premises after neutralization and addition of makeup water.

After merging, 8 KLD of wastewater will be generated which will be treated in proposed STP of 10 KLD capacity.

6.7 Industrial Waste Management

Generated Slag from furnace, Dust from cyclones and Bag filters would be stored and transported to TSDF site.

6.8 Solid Waste Management

Generation of solid waste will be minimum. Generated waste shall be sold to recycler. Solid waste management will be done as per MSW 2000 rule & amended thereof.

6.9 Power Requirement & Supply/source

At present, 6398 KW of power load is available. After merging, electrical power will be 9925 KW. In case of power failure, existing DG set of 125 KVA is there & after merging, DG sets of 125 & 250 KVA will be provided.

Source: Himachal Pradesh State Electricity Board (HPSEB).

7 REHABILITATION AND RESETTLEMENT (R & R) PLAN

No, Rehabilitation and Resettlement (R & R) Plan required.

8 PROJECT & COST ESTIMATES

The Project is envisaged to be undertaken immediately after getting statutory approvals.

8.1 Total Project Cost

After merging, total estimated Project cost will be approximately Rs. 3038.66 Lacs.

9 ANALYSIS OF PROPOSAL (FINAL RECOMMENDATIONS)

This project is for capacity enhancement of manufacturing unit by replacing existing induction furnace and enhance production capacity 45,000 MTPA to 1,40,000 MTPA. With the implementation of the project after merging, the socio-economic status of the local people will improve substantially. The land rates in the area will improve in the nearby areas due to the proposed activity. This will help in upliftment of the social status of the people in the area. The merging of project will also help to increase the natural beauty of the area by developing and planting new plants along with road as well plant premises.