Executive Summary

Of

Proposed installation of 2x350 TPD DRI plant for the production of 2,31,000 TPA of Sponge Iron, 2 x 40T of Induction Furnace along with CCM for production of 2,64,000 TPA of Billets and Rolling Mill for the production of 2,64,000 TPA TMT bars and 32 MW of AFBC, 19 MW of WHRB

Project by

M/s Dinanath Allied Steel Manufacturing Private Limited

At Plot No. B-3 MIDC Mul, District Chandrapur, Maharashtra.

Environmental Consultant

Pollution and Ecology Control Services

Accreditation no.: NABET/EIA/2225/RA 0291 Valid up to 16th October 2025

Executive Summary

1.0 Name of the project along with applicable schedule and category as per EIA, 2006

M/s. Dinanath Allied Steel Manufacturing Private Limited proposes a project for installation of 2x350 TPD DRI plant for the production of 2,31,000 TPA of Sponge Iron, 2 x 40T of Induction Furnace along with CCM for production of 2,64,000 TPA of Billets and Rolling Mill for the production of 2,64,000 TPA TMT bars and 32 MW of AFBC, 19 MW of WHRB at Plot No. B-3 MIDC Mul, District Chandrapur, Maharashtra. The proposed project attracts the provisions of EIA Notification, 2006 and falls under Category "A" of 3 (a), Metallurgical Industries (Ferrous and Non-ferrous). in Schedule to the Notification.

As a part of EIA process, proponent has made online application on 26th July, 2023 along with Form-1, copy of pre-feasibility report and other documents. The Ministry vide letter IA-J-11011/60/2021-IA-II(I) dated 18thSeptember,2023 prescribed Standard ToRs for EIA study.

2.0 Location and accessibility

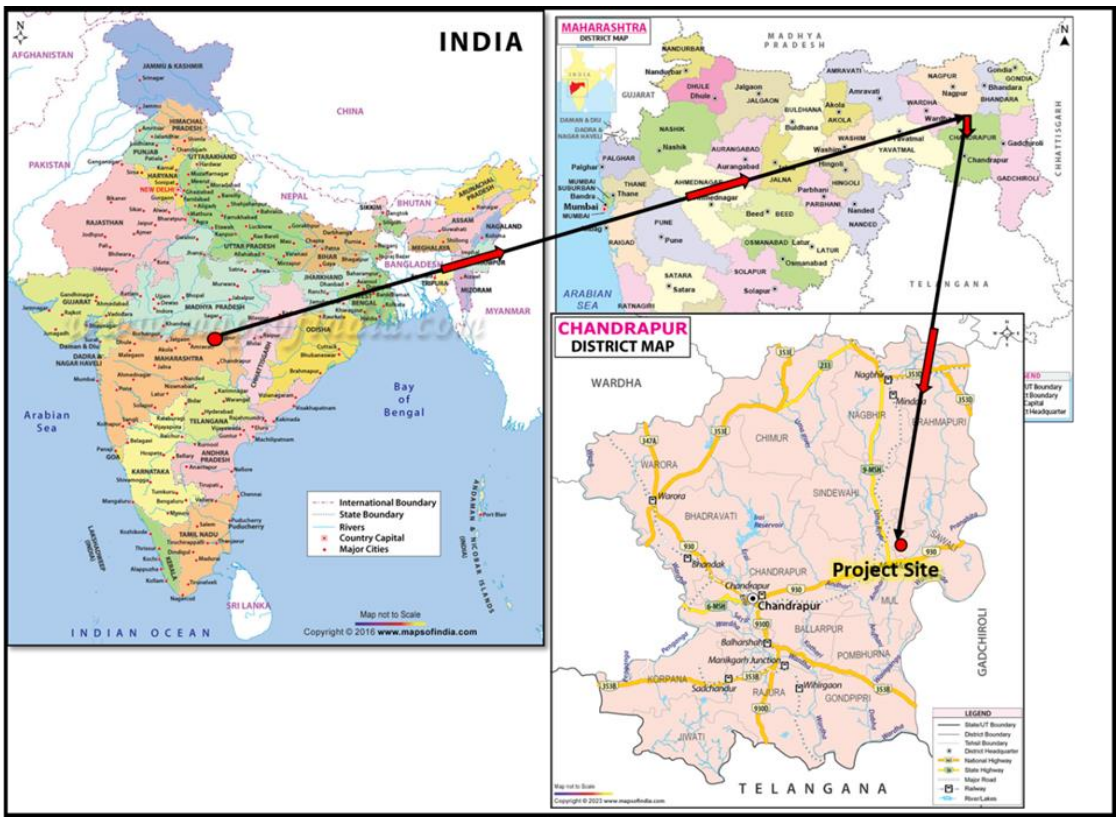
The proposed project will be located at Plot No. B-3 MIDC Mul, District Chandrapur, Maharashtra. The total area requirement for the proposed project is 13.92 ha (34.39 Acre). The nearest highway is NH-930 at 750 m in the south direction. The nearest Airport is Nagpur International Airport 128 km.

Details of the Project Site

S. No	Particulars	Site (MUL MIDC)
1	Project Site	M/s. Dinanath Allied Steel Manufacturing Private Limited at Plot No. B-3 MIDC, Mul, District Chandrapur in Maharashtra

2	Coordinated of Project Site (Latitude Longitude)	A. 20°5'7.53"N 79°42'52.50"E B. 20°5'7.90"N 79°42'58.30"E C. 20°5'1.21"N 79°42'57.12"E D. 20°5'1.11"N79°43'2.88"E E. 20°4'49.80"N 79°43'3.64"E F. 20°4'49.31"N 79°42'54.03"E
3	Area	34.39 acres (13.92 ha)
4	Elevation above MSL	195 MSL
5	Toposheet	55 P/10, 55 P/16
6	Present land use	Project will be located in notified industrial area.
7	Nearest National Highway/State Highway	NH- 930 : 750 m (S) SH-7 : 750 m (S) MSH 9 : 1.0 Km (W)
8	Nearest Airport/ Air Strip	Morwa Airport : 52.5 Km (WSW) (Dr. Babasaheb Ambedkar International Airport Nagpur : 128.00 Km (NNW))
9	Nearest Railway Station	Maroda Railway Station : 5.5 Km (WNW)
10	Nearest Village	Marhegaon : 740 m (W)
11	Nearest Forest	Rajoli Reserved Forest : 2.0 Km (N) Reserved Forest : 9.0 Km (SW)
12	Ecologically Sensitive Zones like wild life sanctuaries, national parks and biospheres	The project is located at a distance of 1.93 km from the Wildlife Corridor and 4.93 kms from the outer boundary of ESZ of Tadoba Andhari Tiger Reserve (TATR) and 17.03 kms from the protected area of TATR. The ESZ of TATR was notified by Ministry vide letter dated 11.09.2019.

13	Water Bodies	• Human Nadi : 2.0 Km (WSW) • Saoli Nadi : 2.0 Km (SSE) • Mul River : 3.0 Km (SSW) • Mungejhari Nala : 6.0 Km (WNW) • Bheokund Nala : 4.5 Km (N) • Banasyoran Nala : 7.5 Km (NNE) • Pathri Nadi : 4.5 Km (E)
14	School	• Gurusai International School : 3.0 Km (SW) • Swami Vivekanand High School : 3.5 Km (WSW) • Subhash Primary School : 4.0 Km (SW) • Z P Primary School : 4.5 Km (WSW) • Ramabai Ambedkar School : 5.0 Km (SW)
15	Hospital	• Bokare Hospital : 4.0 Km (WSW) • Sub District Hospital : 6.0 Km (WSW) • Shende Hospital : 6.0 Km (SW)
16	Temple	• Shri Gajanan Maharaj Temple : 3.5 Km (SE) • Gajanan Maharaj Temple : 5.5 Km (SW) • Hanuman Temple : 5.0 Km (SW) • Shiv Temple : 5.0 Km (SSE)
17	Industries	• Rajuri Steel and Alloys Pvt. Ltd.: Adjacent (S) • Creta Energy Ltd. : 30 m (W) • G.R. Krishna Ferro Alloys Pvt Ltd.: 140 m (NW) • Rice mill : 750 m (SSW)

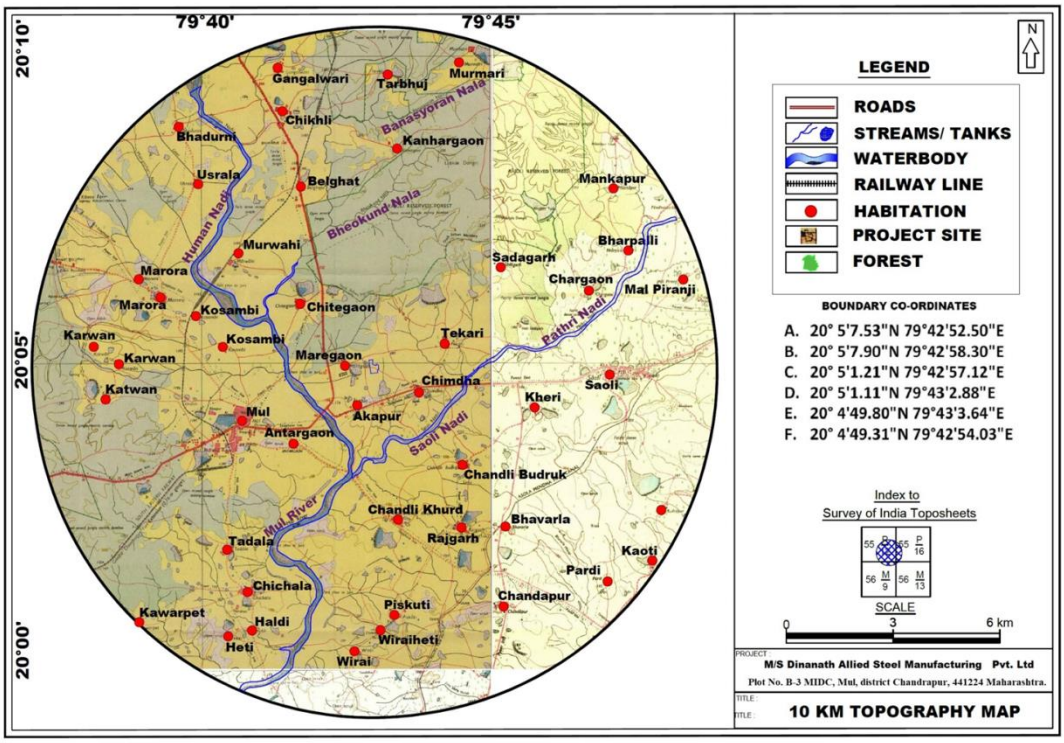


Source: Maps of India

General Location Map

The google image is shown in following figure.

The Topographical map of 10 km radius is given in the figure below.



SIZE OR MAGNITUDE OF OPERATION

Details of proposed new units with configuration are as follows:

Sr. No	Name of Product	Proposed Unit	Proposed Capacity
1.	Sponge Iron	DRI Plant (2X350 TPD)	2,31,000 TPA
2.	M.S Billets	Induction Furnace (2 X 40 T)	2,64,000 TPA
3.	Power Generation	AFBC Boiler	32 MW
4.		WHRB	19 MW
5.	TMT Bars	Rolling Mill	2,64,000 TPA

3.0 Resource Requirements:

Raw Material Requirement:

The details pertaining raw material requirement along with source and mode of transportation is provided in the following table:

S. No.	Input Raw Material	Quantity (TPA)	Sources	Distance from project (in Kms.)	Mode of Transport
1.	Iron ore	330330	Surjagadh Iron ore mines, Gadchiroli and open market.	170	By road
2.	Coal	445239	The mix of Indigenous & Imported coal from WCL mines/open market/imported	__	Through rail and road
3.	Dolomite	11550	The dolomite is sourced from open market	---	By Road through covered trucks
4.	Sponge Iron	231000	In house	-	Conveyor
5.	Billets	264000	In house	-	Conveyor
6.	Scrap	80022	Open market	-	By road
7.	Ferro Alloys	12114	Open market	-	By road
8.	Dolochar	128000	In house + Open market	-	Conveyor/by road

Water Requirement:

The total water requirement will be 2105 KLD which will be sourced MIDC, Mul. M/s Dinanath Allied Steel Manufacturing Private Limited is committed for Zero Liquid Discharge; entire wastewater will be treated and reused.

Land Requirement:

The proposed project will be established over an area of 13.92 ha. The entire land for industrial set up as well as green belt development is in possession of the proponent.

Man Power Requirement:

The manpower requirement for the operational phase of the project is 500 people. In addition, there will be an indirect employment for skilled/ semi-skilled people during project life. All attempts will be made to employ suitable, locally available, skilled

personnel from the nearby area. In case of non-availability of skilled persons, people will be employed from outside area.

Power Requirement

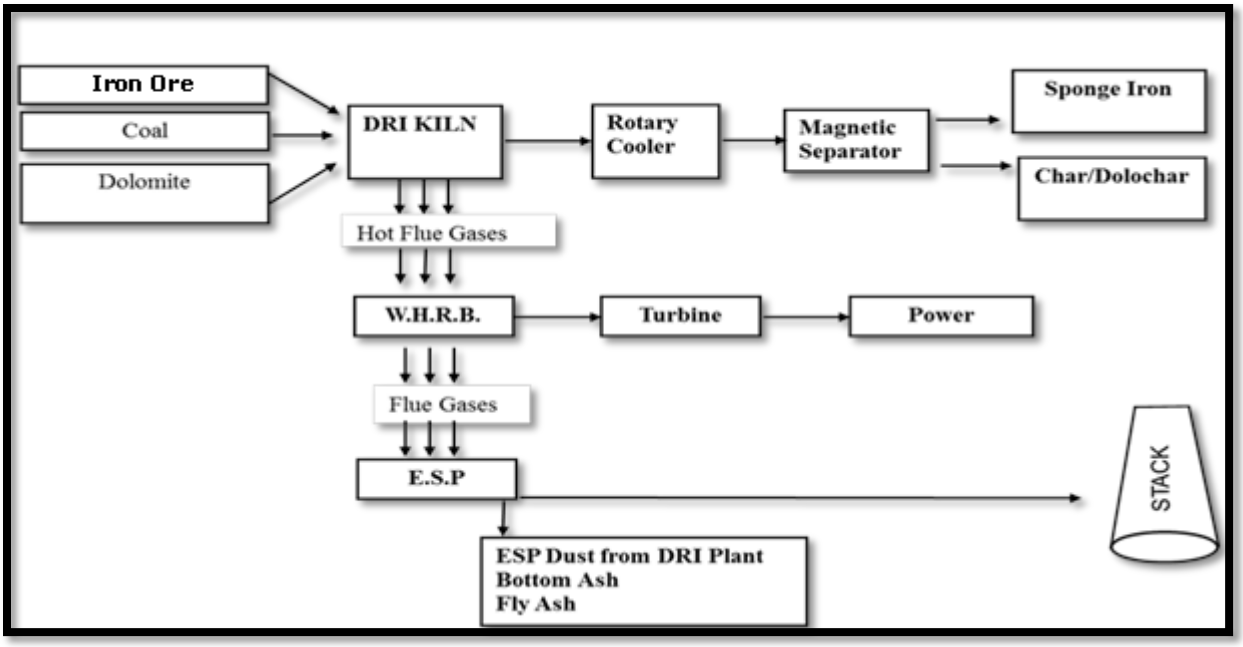
Total Power required for the proposed project during operation is 21 MW, which will be sourced from captive power plant. In case of excess power requirement, same will be met from Maharashtra State Power Transmission Corporation Limited. Power requirement during construction will be met from Maharashtra State Power Transmission Corporation Limited.

4.0 Operational Activity:

The production process of each plant is explained in brief in the following paragraphs:

DRI Plant:

The sponge iron, is the product of reducing iron oxide in the form of iron ore below the melting point of iron and typically in the range of 800–1200 °C. Iron oxide is charged into rotary kiln in the form of pellet, iron ore lumps, or fines along with Coal and Dolomite. The Iron Oxide is reduced to Iron Ore. The coal and dolomite get burnt in the Kiln. The material from the kiln is cooled in the cooler and the same is subjected to magnetic separation to separate sponge iron and Dolochar. The emissions from Kiln are sent to After Burning Chamber for complete burning of CO. The heat from the stack emissions is utilised by Waste Heat Recovery Boiler (WHRB) for production of power. The emissions after utilizing the heat will be sent to ESP and discharged finally to atmosphere after arresting the dust particles (99.99% efficiency) through stack of height 70 meters.



Continuous Casting Machine:

Sponge iron, scrap and fluxes will be melted in an induction furnace using electric power. CCM will be used to continuously cast the liquid steel in required cross section and in length. It consists of Tundish, Mould, Bow with withdrawal mechanism, straightening mechanism and cooling bed, hydraulic system for withdrawal mechanism, water pumps and cooling towers for water spray on the withdrawn section as well as on the cooling bed.

The Induction Furnace Unit shall be equipped with helmet type swiveling Hood for suction of gases to a suitable Bag Filter through two cyclones. There shall be additional suction hoods mounted on the walls and roof of the Induction Furnace shed to suck up extra fumes and fumes released during tapping operations.

Power Plant:

WHRB Based Power Plant:

Production of sponge iron in DRI kiln generates huge quantities of hot flue gases carrying considerable sensible heat. The energy content of these gases can effectively be used to generate electric power as well as steam for meeting various process requirements.

AFBC Boiler Based Power Plant

The power plant will operate on Dolochar generated in the DRI Kiln. The Dolochar along with other auxiliary fuels such as coal, etc. will be used in the furnace for production of power.

Rolling Mill

The process of shaping metals into semi-finished or finished forms by passing between rollers is called rolling. Rolling is the most widely used metal forming process. It is employed to convert metal billets to simple stock members like bars. In rolling, the metal is plastically deformed by passing it between rollers rotating in opposite direction. There is negligible increase in width, so that the decrease in thickness results in an increase in length.

5.0 Key Pollution Concerns:

The key pollution concerns from the proposed project will be stack emissions, fugitive emissions, wastewater generation, noise levels and solid waste generation. The project will provide pollution control equipment for restricting the pollution from stack emissions. Dust suppression system will be provided for controlling the fugitive emissions. Green belt will be developed and equipment will be maintained regularly. Zero liquid discharge will be implemented. Solid waste generated will be recycled/supplied to others for re-utilization, etc.

6.0 Baseline Environmental Studies:

Ambient Air Quality:

The ambient air quality was monitored at 8 locations for 12 weeks during March-May 2023. The ambient air quality levels were as follows:

PM_{10} : 41.8 to 64.3 µg/m^3

$PM_{2.5}$: 17.6 to 39.4 µg/m^3

SO_2 : 10.0 to 25.1 µg/m^3

NO_x : 14.9 to 31.5 µg/m^3

The concentrations of PM_{10}, $PM_{2.5}$, SO_2 and NOx were found within the National Ambient Air Quality Standards (NAAQs).

Ambient Noise Quality:

The noise levels measured at eight stations within the study area. Recorded noise levels in the study area of proposed project site, are in the range of 37.6– 51.4 dB(A) (night time) to 38.2– 54.9 dB (A) (day time) at all eight monitoring stations. Noise levels measured are within limit of 55dB(A) for Residential Area or 75 dB(A) for Industrial Area.

Traffic Study:

The traffic study was carried out at 2 locations namely near Government ITI on Maharashtra State Highway no.7 and near MIDC Road T Point on MIDC Road. Based on the study it is observed that, after the operation of the proposed plant, the level of service will be very good.

Surface & Ground Water Quality:

A total 16 samples including eight surface & eight ground water samples were collected and analyzed. The water samples were analyzed as per Standard Methods for Analysis of Water and Wastewater, American Public Health Association (APHA) Publication. The data indicates that the ground water as well as the surface water quality is within respective prescribed standards.

Soil Quality:

Eight Soil samples were collected analyzed for physico-chemical characteristics at selected locations in the study area. Texture of all Soil samples are found to be Silty clay, Silty sand with gravel, etc. as per Texture Classification. Colour of all Soil samples are found to be Gray to Black Cotton. pH values varied between 6.74 to 7.85. The NPK levels of soils in the study area found to be in good range.

Biologic Environment:

During the Ecology &Biodiversity survey total 157 species of plants have been observed. During Fauna study total 14 species of fish, 3 species of Amphibian, 16 species of

Reptiles, 47 species of Birds & 16 species of Mammals have been reported by local people during baseline survey. No endangered plant was observed during survey but vegetation is rich, many diversities of herbs and shrubs. Many medicinal plants were observed. Some quadrates have shown dominance of herb and shrub.

Land use:

The land use of the study area was analysed based on satellite imagery (primary data) and census of India (secondary data) information. The observations are as follows:

- The study area of 10 km radius mainly comprises agricultural land, which is 64% of the total area. The agriculture land comprises of 55% of the unirrigated area, 28% of irrigated area and 17% of the culturable waste land
- Forest area occupies 15% of the study area
- There are few water bodies and river in the area accounts for 6.65% of the study area.
- There are Human river, Mul River, Saoli nadi, Pathri nadi within 10 Km radius of study area along with Bheokund nala and Banasyoran nala.

Socio-economic environment:

The socio-economic survey was carried out in the study area. It was observed that there are 37 villages in the study area with a population of 76899 having 18861 households. The sex ratio is 1001 females to 1000 males. The Scheduled Caste and Scheduled Tribes population is 13% and 14.79% of the total population respectively. The area is having a literacy rate of 66.42%. Agriculture is only the source of income for the people in the project region. The main crops grown are Rice and Wheat. The working population is 50.8% and non-working population is 49.2 %.

7.0 Anticipated Impacts:

Impact on Ambient Air Quality:

The major pollutants of air in a proposed plant are the particulate matters from the various stacks and fugitive emissions due to material handling. SO_2 and NO_X also add to the pollutant level due to proposed project operation. Company will take all measures to effectively control the air emissions and periodic monitoring of the stack emissions.

During operation phase, air emissions both gaseous and fugitive will be on account of process emissions from stacks of Sponge Iron, Induction Furnace and Power Plants as well as transportation of men and material. The maximum incremental concentrations of PM_{10}, $PM_{2.5}$, SO_2, NO_X found to be 1.73 $\mu g/m^3$, 0.99 $\mu g/m^3$, 3.85 $\mu g/m^3$, 2.54 $\mu g/m^3$ respectively. As per the worst-case scenario, the maximum incremental concentrations of PM_{10}, CO found to be 12.8 $\mu g/m^3$, 4.56 $\mu g/m^3$ respectively. The total (baseline +incremental) concentration even after considering the worst-case scenario found to be within prescribed standards.

Impact on ambient noise quality:

During operation, the major noise generating sources are crushing mill, auto loading section, electric motors etc. These sources will be located far off from each other. Under any circumstances the noise level from each of these sources will not exceed 85 dB (A). Noise levels generated in the project site will be confined to the noise generating plant units hence the impact of noise levels on surroundings will be insignificant.

Impact on road and traffic:

Based on the study it is observed that, after the operation of the proposed plant, the level of service will be very good.

Impact on surface & ground water resource and quality:

The water for the proposed project will be supplied by MIDC. The project will implement zero liquid discharge. No ground water will be abstracted.

Impact on terrestrial and aquatic habitat:

The project will be located in notified industrial area. Project will implement zero liquid discharge. Hence impacts on terrestrial and aquatic habitat is negligible. A wildlife conservation plan with financial outlay of Rs. 50,00,000/- was prepared. The conservation activities proposed in the plan will be implemented in consultation with Forest Department.

Impact on socio-economic environment:

M/s. Dinanath Allied Steel Manufacturing Private Limited will provide employment to 500 workers. The local persons have been given preference in employment as per the qualification and technical competencies. The project will also carry out developmental activities under CER and CSR.

8.0 Alternative Analysis

The proposed project will be located at Plot No. B-3 MIDC, Mul, District Chandrapur in Maharashtra. Earlier MoEF&CC vide letter no. J-11011/60/2021-IA. II(I) dated 20.02.2021 granted ToR to M/s. Dinanath Allied Steel Manufacturing Private Limited for proposed manufacturing of Iron Ore Beneficiation Plant of 0.6 MTPA & Iron Ore Pellet Plant of 0.4 MTPA at same location. Subsequently, public hearing was conducted on 30.11.2021 as per ToR letter no J-11011/60/2021-IA.II (I) dated 20.02.2021. Later on, the PP decided to drop this proposal for which ToR was granted by MoEF&CC vide letter dated 20.02.2021. PP submitted a request to Ministry of Environment, Forest & Climate Change, New Delhi for withdrawing of ToR issued vide letter no. J-11011/60/2021-IA.II (I) dated 20.02.2021. Now considering the potential demand in India M/s. Dinanath Allied Steel Manufacturing Pvt. Ltd. proposes to set up a project for installation of 2X350 TPD DRI Plant for Production of 2, 31,000 TPA of Sponge Iron, 2X40 T of Induction Furnace along with CCM for Production of 264,000 TPA of Billets and Rolling Mill for 264,000 TPA of TMT bars and 32 MW of AFBC, 19 MW of WHRB. Hence no alternative site was considered for this project.

The proposed project will allocate Rs 4 Crores for carrying out activities under Corporate Environment Responsibility in nearby villages. The project will provide employment to 500 nos. of people directly. The project will address all the social concerns.

9.0 Environmental Monitoring Program

The project will carry out the monitoring of environmental quality parameters such as ambient air, stack emissions, fugitive emissions, noise, water and soil etc. as per following schedule:

Activity	Aspect	Monitoring Parameter	Location	Frequency	Responsibility
Construction Phase					
Construction Area	Ambient air quality	PM_{10} , $PM_{2.5}$, SO_2, NO_x	3 locations	Once in month	M/s. Dinanath Allied Steel Manufacturing Private Limited
	Fugitive emissions	PM_{10} , $PM_{2.5}$	3 locations	Twice in a month	
	Ambient noise levels	Equivalent noise levels in dB(A)	3 locations	Once in a month	
	Soil quality	Physico-chemical parameters and heavy metals of soil	1 location	Once in a season	
Operation Phase					
Plant area	Stack emissions	PM_{10} , $PM_{2.5}$, SO_2, NO_x	All stacks through CEMS	Continuous	M/s. Dinanath Allied Steel Manufacturing Private Limited
In and around the plant	Ambient air quality	PM_{10} , $PM_{2.5}$, SO_2, NO_x	5 locations	Once in a month	
Plant area	Fugitive emissions	PM_{10}, $PM_{2.5}$	5-6 locations as per SPCB	Twice in a month	
Villages near to the project area	Ground water	Parameters as per BIS:10500, 2012	3 locations	Seasonal	
Water bodies in 10 kms study area	Surface water	Parameters specified in BIS:2296 & as per CPCB norms	3 locations	Seasonal	
In and around the plant area	Ambient noise levels	Equivalent noise levels in dB(A)	5 locations	Once in 3 months	
Plant area	Work zone noise levels	Equivalent noise levels in dB(A)	5-6 locations	Once in a month	
In and around plant area	Soil quality	Physico-chemical parameters and heavy metals of soil	3 locations	Once in Pre-Monsoon and Post Monsoon season	

Green belt:

The plantation helps to capture the fugitive emissions and attenuate the noise apart from improving the aesthetics quality of the plant area. Green belt will be developed in open areas along with road sides. The plantation will be developed over an area of 4.61 ha. with native trees.

Social Parameters:

M/s. Dinanath Allied Steel Manufacturing Pvt. Ltd. would aid in the overall social and economic development of the region. The plant will give employment to about 500 nos. of people. The project will allocate an amount of Rs. 4 Crores for activities to be carried out under CER in the nearby villages.

10.0 Additional Studies:

Risk Assessment:

The risk assessment of different plants was carried out as part of EIA study. The project prepared onsite emergency management plan. The details pertaining off site management plan will be submitted to District Authorities before commencing operations of the proposed plant.

Public Consultation and Action plan to address the issues raised during public consultation as per MoEF&CC O.M. dated 30/09/2020

The public hearing is yet to be conducted. The project will submit the action plan as per MoEF&CC OM dated 30.09.2020 for addressing the issues raised in public hearing.

11.0 Project Benefits:

M/s. Dinanath Allied Steel Manufacturing Pvt. Ltd. would aid in the overall social and economic development of the region. The plant will give employment to about 500 nos. of people. The project will allocate an amount of Rs. 4 Crores for activities to be carried out under CER in the nearby villages.

12.0 Environmental Monitoring Program:

Dinanath Allied Steel Manufacturing Private Limited will carry out the Environmental Monitoring after obtaining environmental clearance. The methodologies adopted for environmental monitoring are in accordance with the CPCB guidelines.

The environmental monitoring locations will be selected considering the environmental impacts likely to occur due to the operation proposed project. The main scope of monitoring program is to track the changes in environmental conditions timely and regularly to take timely action and adopt mitigation measures for protection of environment.

Air quality management plan:

The pollution control equipment like ESPs/bag filters/dust collectors will be provided for controlling the emissions from stack. Dust suppression system will be provided for controlling fugitive emissions. Green belt will be developed. Ambient air quality, stack emissions and fugitive emissions will be monitored regularly.

Noise quality management plan:

Padding/insulation will be provided at various locations to avoid noise due to various activities. Regular maintenance of the equipment will be done. Ear plugs/muffs will be provided. Ambient and work zone noise levels will be monitored.

Solid and Hazardous Waste Management Plan:

The solid waste generated from the proposed plant will be managed as per the existing rules, authorization to be obtained from MPCB. The solid waste such as Dolochar, tail cuttings will be reused and others will be supplied to different vendors.

Effluent Management Plan

The project will implement zero liquid discharge. Entire effluent generated will be reused after suitable treatment. A packaged STP will be provided for the treatment of sewage. Treated sewage will be reused for plantation.

Storm Water Management Plan

Rain water harvesting structures will be provided to harvest the surface run off from the plant area and roof top. The surface water run-off would be led to a sump for settling and

the over flow would be collected in the common water basin for further uses in the plant to reduce the fresh water requirement.

Occupational Health & Safety Management Plan:

M/s. Dinanath Allied Steel Manufacturing Private Limited will provide all necessary provisions under Factory Act. In addition, a safety committee with equal representation from Management and Workers will be formed. All personal protective equipment like Safety shoes, helmet & uniform will be issued to each employee based on the nature of job involved. Regular health check-up of all the workers at nearby Hospitals. First aid training shall be given to the employees.

Greenbelt Development Plan:

The plantation will be developed along the boundary, along roads and open areas. The green belt in the project will be developed over an area of 4.61 ha i.e. 33% of the project area. The species will be selected in consultation with local forest department.

Socio-economic management plan:

M/s. Dinanath Allied Steel Manufacturing Private Limited will contribute towards overall social and economic development of the region. The plant will give employment to about 500 nos. of people. The project will formulate EMP to mitigate the adverse impacts likely to arise in the proposed project activities in order to minimize the apprehensions to the local people.

Project Cost and EMP Implementation Budget:

The proposed project cost will be Rs.400 Cr. (approx.). The project will allocate a budget of Rs. 37.21 Crores for capital works for the protection of environment. In addition to the capital budget, the project will also allocate a recurring budget of Rs. 1.51 Crores every year for operation and maintenance.

CONCLUSION

It is submitted that the proposed project will take all steps to minimize the impacts on environment and people in the nearby villages. The proposed project activities will not have any major adverse effect. The project will contribute towards overall development of the region in addition to providing employment to local people.