

Executive Summary

Introduction

Indiabulls Real Estate Limited (IBREL) and Maharashtra Industrial Development Corporation (MIDC) have collaborated to form an SPV called Indiabulls Industrial Infrastructure Ltd. (IIIL) to set up a multiproduct Special Economic Zone (SEZ) (Project) in Sinnar in the district of Nashik, Maharashtra. The Project will cover a notified area of 1011.264 Ha on the State Highway (SH) SH-39 along the Sinnar-Shirdi stretch.

The proposed Project site falls in the Phase 1 of Delhi Mumbai Industrial Corridor (DMIC). Indiabulls Nashik SEZ is Maharashtra's first multi-product SEZ for growth sectors like free trade and warehousing, auto and ancillary, aviation and ancillary, pharmaceutical and formulations, light engineering and electronic and electrical.

Environmental Impact Assessment (EIA) study was carried out by M/s Voyants Solutions Pvt. Ltd. (Voyants) in July, 2012 complying with the Terms of Reference (ToR) issued vide letter dated 13th August 2008, file no – 21-202 / 2008 – I a – iii, Expert Appraisal Committee (EAC) Observations vide letter dated 25th May 2010, file no – 21-202 / 2008 – I a – iii.

In August, 2012, EAC in its meeting noted that the project proponent (Indiabulls) did not conduct Public Hearing for the project claiming that the SEZ is proposed in the notified industrial area. However, the Committee upheld the recommendation letter in its meeting held in April 2010, to conduct the Public Hearing and also noted that the ToR 4-year validity period has expired and that a fresh application should be submitted for obtaining ToR.

Form-I and Pre-Feasibility Report (PFR) was submitted by Voyants in October 2012. The present EIA study has been conducted by EQMS India Pvt. Ltd. (EQMS) for the proposed Project complying with the ToR issued vide letter dated 11th April, 2013, file No. – 21-71/2012-IA.III and the above-mentioned ToR issued letters. EQMS has supplemented the existing base line data collection with three months from January end through April end, 2014, and prepared / re-validated the EIA report.

The proposed project will comprise of Processing Area (PA) and Non Processing Area (NPA) will be spread over a plot area of 1011.264 ha. An area of 436.14 ha has already been granted Environmental Clearance for Thermal Power Plant (TPP) by concerned Expert Appraisal Committee of Ministry of Environment and Forests (MoEF) vide letter no. J 13012/11/2008-IA.II (T) dated 28th July 2010 (Phase-I) and J-13012/156/2010-IA.II (T) dated 5th August, 2011 (Phase-II). Therefore, the present proposal seeks Environmental Clearance for the balance area of SEZ, i.e. 575.07 ha. comprising of 512.068 Ha in the PA and 63.002 Ha in the NPA.

Need for the Project

Nashik-Sinnar falls in the project influence area of the US\$ 90 Billion Delhi Mumbai Industrial Corridor which is being developed by the Indian Government. The vicinity of the SEZ to the proposed Investment region is also likely to enhance the industrial attractiveness of the SEZ. Low cost of living and proximity to already well developed industrial hubs of Mumbai and Pune make Nashik an attractive investment destination.

Initiatives in SEZ that may aid this growth include development of quality social infrastructure and infrastructure support for establishment of training institutes to address sector specific skill requirements. Assured supply of quality power and water is also a key advantage for the proposed SEZ. Further, achieving economies by supplying power from captive power plants would make the SEZ even more competitive.

Nashik SEZ's fast pace of development as compared to competing SEZs places it at an advantageous position. Labour cost at Nashik is relatively cheap as compared to industrial hubs like Mumbai / Pune. This would help industries in reducing their labor cost, which is continuously rising in places like Mumbai / Pune.

Based on the above discussion, the key advantages of the location of the proposed SEZ are listed below:

- There is considerable industrial activity in the vicinity of the proposed SEZ. This is a big advantage in facilitating the attraction of investment in the SEZ.
- Nashik is well connected to the prime economic regions of Pune, Mumbai and Aurangabad. This connectivity would help the units in the SEZ by ensuring faster / timely movements of goods. Further, good connectivity will also help IIL in positioning the SEZ at par with other SEZs in India.
- Recently, considerable investment activity has been witnessed in Tier II & III cities. Nashik is one of key areas which has received a considerable amount of investment (Mahindra & Mahindra and development of IT parks being prime examples). Further, there are promising development plans for the district.
- Nashik has demonstrated its potential for attracting several Auto, Electrical and Engineering companies. The potential to establish the above industries in an SEZ would be an added advantage for Nashik SEZ.
- One of the key advantages of the proposed site is its vicinity to Pune district. The SEZ is connected to Pune by NH-50 on which key industrial clusters of Pune are located (particularly Auto & Auto Components). Presence of industrial clusters in the neighbouring regions offers an opportunity to IIL to attract investments conceived for Pune district.

Location of the Project Site

The proposed SEZ Project is located in the villages of Musalgaon and Gulvanch in Sinnar Tehsil in the district of Nashik, Maharashtra. The location map of the proposed Project site is presented in the following figure.

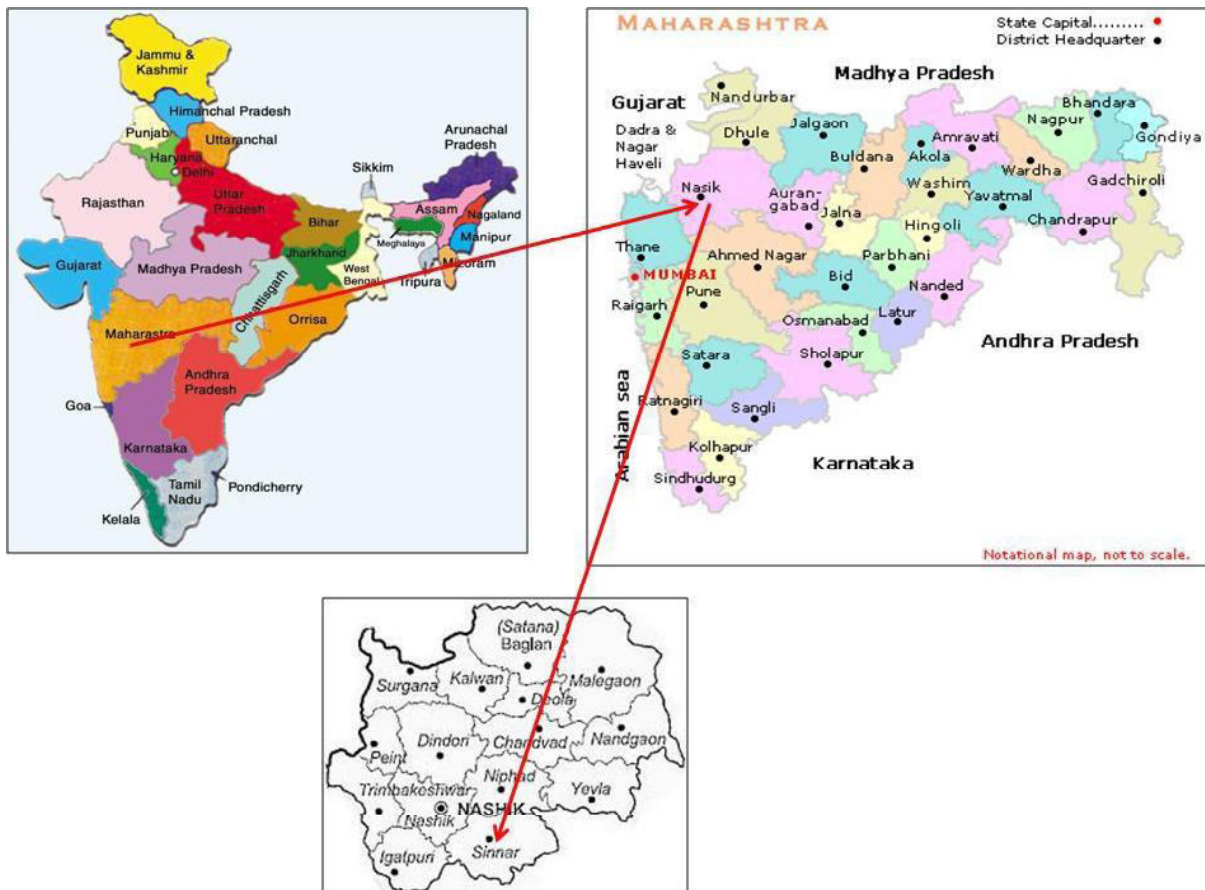


Figure 1: Location of the Proposed Project

Connectivity of the Project Site

The proposed project site is located in MIDC's Industrial area of Sinnar situated at approximately 33 km from Nashik city. The proposed site is 5.70 km from NH-50 Nashik-Pune highway and 1.20 km from SH-45 (Sinnar-Loni-Kolhar) and adjacent to SH-39 (Sinnar to Shirdi). The connectivity of the proposed project site is provided in Table 1.

Table 1: Connectivity of Proposed Project Site

Description	Features	Distance	Direction
Nearest Highway	NH-50 (Nashik-Pune Highway)	5.70 km	West
	SH- 45 (Sinar-Loni-Kolhar)	1.20 km	South
	SH -39 (Sinnar - Shirdi)	Adjacent to the proposed site	South
Nearest Railway Station	Niphad Railway Station	23 km	North
	Nashik Railway Station	24 km	North-west
Nearest Airport	Ozar Airport	30 km	NNW
Nearest Village	Gulwanch	1 km	North
	Khopdi Budrukh	1.50 km	South-east
	Shahpur	1.60 km	South-east
	Kedarpur	0.70 km	SSE
	Baragaon Pimpri	2.0 km	North
	Musalgaon	0.9 km	SSW
Nearest City	Nashik	31 km	NNW

Site Selection Criteria

The SEZ Act, 2005 stipulates an area requirement of minimum 1000 Ha of contiguous land for setting up a multiproduct SEZ. This requirement is met by IIL's site as the stipulated area is 1011.264 Ha. The proposed site also falls in the first phase of DMIC. The following criteria that were taken into account for the selection of the proposed site are tabulated in the Table 2.

Table 2: Site Selection Criteria

Criteria	Justification
Location	<ul style="list-style-type: none"> ● SEZ is located in notified industrial area ● SEZ development comes under Notification of Industrial Land by Industries, Energy & Labor Department, Govt of

Criteria	Justification
	Maharashtra dated 6.01.1996 <ul style="list-style-type: none"> The proposed SEZ project site is uncultivated and barren land
Contiguity	<ul style="list-style-type: none"> Contiguous 1011.264 Ha of land available
Accessibility	<ul style="list-style-type: none"> Direct access from SH-39 Niphad is the nearest Railway Station, about 33 km Jawaharlal Nehru Port Trust is the nearest port, approximately 205 km from the site Ozar Airport is located approximately 30 km from the proposed site
Infrastructure Availability	<ul style="list-style-type: none"> Assurance of water supply from MIDC <ul style="list-style-type: none"> Fresh water requirement for PA – 14.13 MLD and for NPA – 2.72 MLD Power demands will be met by IRL's TPP of 10x270 MW <ul style="list-style-type: none"> Maximum power requirement for PA – 61.2 MW and for NPA – 21.6 MW Availability of local manpower

The proposed site located in the district of Nashik, Maharashtra, has therefore been selected on the basis of the techno-economic feasibility analysis. All the above mentioned criteria have been taken into consideration for the selection of the proposed site in the MIDC notified industrial area. Hence, an alternate site was not conducted.

Existing Infrastructure in the project site and surroundings

The proposed project site is an open, barren and non-agricultural land. Settlements are present in all directions, but of scattered nature. Proposed SEZ site is accessible from SH-39 which connects to National Highway NH-50 as well as State Highway SH-45 to the south-west of the proposed project site. The features surrounding the project site are provided in Table 3.

Table 3: Existing Features surrounding the project site

Direction	Features
North	Agricultural land
NE	Settlement and Agricultural land
East	Open grass and Agricultural land
SE	Settlement and Agricultural land

Direction	Features
South	Settlement and Agricultural land
SW	Musalgaon Industrial Area
West	Settlement and Agricultural land
NW	Open grass and Agricultural land

Land use

The basic purpose of land use pattern and classification in an EIA study is to identify the manner in which different parts of land in an area are being utilized or not utilized. Remote sensing data provides reliable accurate baseline information for land use mapping as it is a rapid method of acquiring up-to-date information of over a large geological area.

A systematic digital image interpretation approach was used to delineate the land use classes. The present study was focused on demarcating boundaries of different land use/land cover units from an analysis of different types of colour registrations of land use/land cover units from satellite imagery. An area around the 10 Km radius of the proposed project was determined by using buffer operation of the GIS software. GIS software (ARC GIS 9.3) was used for the study. The digital image processing is done in Image processing software ERDAS 9.1. Multi-spectral supervised classification using the maximum likelihood algorithm followed by smoothing and editing of pixels was performed in that platform. Satellite data which is used to make Land use and land cover of the area is LISS III (23.5 meters) and Landsat 4-5 Thematic mapper (30 meters resolution). The area contains different types of land cover and land use:-

- i. Open grass & shrub land
- ii. Agricultural land
- iii. Agri-fallow land
- iv. Water-body
- v. Settlement
- vi. Vegetation

The total cultivated area represents around 17% of from the whole land cover. The Open grass & shrub land surrounding the proposed project area covers about 30 % of the area. Agricultural Fallow covers about 48% of the total area. There are lots of dry nallah present in the study area. Vegetation covers only 2% of the total area. Settlement is covering 3% of the study area. Core area of the Project site is dominated by Open grass

and shrub land. There is no habitation present on the Project's core area. Table 4 presents the land use category of the study area.

Table 4: Land Use Category in the Study Area (10 km Radius)

Land use/ land over classes	Area (Sq. km)	Area in Percentage
Open grass & shrub land	145.29	30
Agricultural land	81.99	17
Agri fallow land	232.14	48
Water Body	0.93	-
Settlement	14.71	3
Vegetation	9.60	2
Total	484.66	100

Project Planning and Area Statement

The total area of the proposed SEZ project is 1011.264 Ha. The final area of the Multiproduct SEZ comprises of Processing Area of 512.07 Ha and Non-Processing Area (NPA) of 499.196 Ha. The NPA includes a Thermal Power Plant (TPP) for which an area of 436.194 Ha has been assigned. Since the concerned Expert Appraisal Committee of MoEF has already granted approval for the Power Plant, the present proposal seeks EC for the balance area of the SEZ, i.e. 575.07 Ha.

Initially, IIL had proposed for an area of 1006.96 Ha for the proposed SEZ project. However, IIL later proposed for the addition of 38.504 Ha and deletion of 34.20 Ha, thus leading to a net addition of 4.304 Ha to the earlier proposed area of 1006.96 Ha. The total area of the proposed SEZ area is 1011.264 Ha. The total land breakup of the proposed SEZ project is provided in Table 5. The area break-up of the PA and NPA of the proposed SEZ project is provided in Table 6 and 7 respectively.

Table 5: Total Land Break-up of the Proposed SEZ Project

S. No.	Land Breakup	Area (Ha)
1	Processing Area (PA)	512.068
2	Non Processing Area (NPA)	63.002
3	Thermal Power Plant (TPP) area which has already obtained Environmental Clearance (EC) – part of the remaining NPA	436.194
Total Area		1011.264

Table 6: Area Statement of PA

S. No.	Land Breakup	Area (Ha)
Processing Area (PA)		
1	Industrial Area	
	Free Trade and Ware Housing	48.260
	Auto and Ancillary	106.173
	Aviation and Ancillary	25.739
	Pharmaceuticals and Formulation	38.608
	Light Engineering	70.782
	Electronic and Electrical	32.174
2	Greenbelt	76.810
3	Utilities	20.995
4	Facilities	18.543
5	Road	65.535
6	Water Bodies	8.449
Total PA		512.068

Table 7: Area Statement of NPA

S. No.	Land Breakup	Area (Ha)
Non-Processing Area (NPA)		
1	TPP which has already obtained EC	436.194
2	Residential	20.791
3	Commercial / Institutional	11.340
4	Utilities	2.520
5	Green and Open	12.600
6	Parking / Roads	15.751
Total Area		499.196

Input Sourcing

Construction Materials

The Proposed project being an industrial area development project, construction materials like stones, aggregates, bitumen's would be required for road construction, drainage, water supply, fencing, and other development activities.

Mostly concrete will be used. Steel and cement will be purchased from reputed manufacturers with valid test certificates only. All the items to be used in the proposed project will be as per the National Building Code. If the building materials with high-embodied energy are locally available, it will be used in construction. Aluminium, bricks, stones, marbles, paint, tiles, electrical ware, glass will be purchased from markets. All material will be delivered to site and shall be processed for final installation at site only.

During the construction phase, transportation of raw materials will be the responsibility of Civil Contract Awardees. Transportation of the raw material will be done in covered conditions only. Each vehicle will be checked for "Pollution under Control" (PUC) certificates. Construction material which can be windblown shall be stored in covered areas.

During the operation phase, raw material will be required by individual industrial units for construction of the industrial unit as well as for their product specific manufacturing processes. These requirements will be met directly by the occupants after taking due approvals of 'Consent to Establish' and 'Consent to Operate' from MPCB.

Water

IIIL will obtain its water supply from MIDC for the proposed SEZ project. Water will not be drawn from Dharna River. Fresh water requirement for PA has been estimated at 14.13 MLD and 2.72 MLD for NPA.

For ensuring adequate supply of water inside the SEZ area, water works will be located at higher places to ensure most economical and efficient water collection and distribution system for the SEZ. The quality of fresh water supplied shall be in conformance with drinking water standards as per BIS: 10500.

Additionally, wastewater after treatment in ETP of the individual units will be used for horticulture, flushing and cooling purposes. The sewage will be tertiary treated to meet the required standards.

The TPP will not use fresh water for process use and will meet its requirements from treated sewage water to be sourced from Water Resource Department (WRD). WRD has allocated 190 MLD of sewage water from STP of Nashik Municipal Corporation. Sewage water will be treated in state of the art technology STP for process water requirements. Use of treated sewage water will serve as a benchmark for power sector and other industrial sectors coming up in this region.

Wastewater generated from the PA and NPA activities has been planned for treatment in STP respectively. The treated wastewater will be reused and recycled for SEZ requirements to achieve ZERO discharge causing no stress on environmental parameters. The fire storage requirement is 0.05 MLD and 0.02 MLD for PA and NPA respectively.

Power Requirement

The total power demand for the Sinnar SEZ project will be 82.8 MW. Source for power requirement will be from IRL from its coal based TPP of 5 x 270 MW.

The DG sets for power back up will be provided with Auto Mains Failure (AMF) panels and will be of enclosed type and conform to Environment (Protection) Act, 1986 and guidelines issued by CPCB.

Solid Waste Generation

Solid waste generation from the operational phase of the proposed SEZ project will be municipal solid waste and industrial process waste. The quantity of municipal solid waste has been estimated to be approximately 5.17 MT/day.

During operational phase, industrial non-hazardous waste and industrial hazardous waste has been estimated as 49.21 MT/day and 4.48 MT/day respectively. Municipal solid waste generation from NPA will be 16.73 kg/day.

Provision of land for CETP is assigned in the planning of the proposed SEZ project which will be constructed at a later stage if the need arises. However, it is proposed that

the individual units will have their own ETPs to maximize the tertiary treatment facility and the treated effluent generated will be reused first for flushing, horticultural purpose and cooling purpose. Treated effluent will be recycled to the maximum extent possible and will aim for zero discharge of wastewater from the project.

During Operational phase, 2.17 MLD of domestic wastewater will be generated and treated in 2.50 MLD STP located within the site. The STP will be provided with primary, secondary and tertiary treatment facilities and will be based on conventional suspended growth treatment system (diffused aeration system). About 1.95 MLD of treated effluent will be generated which will be completely reused first for flushing and then for horticultural and then for cooling purpose. This will also reduce the domestic water demand efficiently.

Environmental Consideration

Industrial Ecological Consideration in Planning

The successful establishment of industrial ecology linkages requires continuing implementation of projects that identify industrial ecology opportunities. Work is needed to clearly identify the regulatory and other policy barriers in order that they are removed. IIL has considered these aspects to integrate following consideration in project planning:

- Maintaining the environmentally important areas intact like forest area, existing plantations, hillock area, and water bodies.
- Provision is made for sewage treatment and water recycling
- Optimal use of natural material like use of cutting material for road and other construction activities.
- Promotion of non-polluting and non-water intensive industries. Zoning of the same based on industry category, air pollution and water pollution.
- Sitting of residential area based on wind pattern
- Provision of large plantation and tree buffer between habitat and industrial zones.
- Provision of water harvesting and waste management
- Intent to promote awareness of cleaner production through industry association during operation stage.

Water Pollution and Control

To avoid any kind of water pollution during construction phase, it is proposed to provide temporary sanitation facilities at construction site/ camp such as septic tank followed by soak pit or mobile toilets.

During the operation phase of the project, water pollution will be in the form of industrial effluent as well as domestic effluent from industrial units in the industrial area. Mitigation of water pollution will be the responsibility of each individual industrial unit. Polluting

industrial units will have to install Effluent Treatment Plant (ETP) and/or Sewage Treatment Plant (STP) as per their requirement in compliance with the MPCB norms. Treated water from ETP and/or STP shall be utilized by the industrial units within their premises for reuse in process/ gardening/ non-potable usage. Any excess quantity of treated water can be sent to green areas of IILL. All the units will opt for "Zero Discharge System". IILL will also provide common sewage treatment plant with an aim of water recycling.

Air Pollution and Control

During the construction phase of the project, air pollution will be mainly from site preparation, transportation of construction material, operation of construction machinery at site, loading and unloading of construction material etc. IILL will take adequate measures to control the air pollution during the construction phase. These are discussed in details in Environmental Management Plan.

During operation phase of the project, air pollution will be mainly from operation of industrial units and movement of vehicles for transportation of raw materials and final products. All the industrial units will take "Consent to Operate" under Air Act from MPCB prior to start of the production and shall provide adequate air pollution control equipment, as applicable, to adhere to the conditions stipulated in the CTO. Provision of green belt all along the area will act as a natural barrier.

The cumulative impact of the proposed SEZ project and TPP at the monitoring locations within 10 km radius are provided in Table 8.

Table 8: Summary of Maximum GLC at Monitoring Locations due to SEZ and TPP

Location		Rise in GLC ($\mu\text{g}/\text{m}^3$)	Max. Background Concentration ($\mu\text{g}/\text{m}^3$)	Impact from Project ($\mu\text{g}/\text{m}^3$)	NAAQS ($\mu\text{g}/\text{m}^3$)
Project Site	SO ₂	0.0	13.7	13.7	80
	NO _x	0.0	23.1	23.1	80
	PM ₁₀	0.0	62.2	62.2	100
	PM _{2.5}	0.0	26.3	26.3	60
Musalgaon	SO ₂	0.82	14.5	15.32	80
	NO _x	10.97	21.1	32.07	80
	PM ₁₀	0.17	63.7	63.87	100
	PM _{2.5}	0.07	25.4	25.47	60

Location		Rise in GLC ($\mu\text{g}/\text{m}^3$)	Max. Background Concentration ($\mu\text{g}/\text{m}^3$)	Impact from Project ($\mu\text{g}/\text{m}^3$)	NAAQS ($\mu\text{g}/\text{m}^3$)
Gulvanch	SO ₂	1.67	14.2	15.87	80
	NO _x	2.73	27.3	30.03	80
	PM ₁₀	0.32	63.2	63.52	100
	PM _{2.5}	0.13	26.7	26.83	60
Kedarpur	SO ₂	0.17	14.0	14.17	80
	NO _x	8.06	23.1	31.16	80
	PM ₁₀	0.15	61.7	61.85	100
	PM _{2.5}	0.06	25.5	25.56	60
Devpur	SO ₂	12.78	13.8	26.58	80
	NO _x	2.88	23.3	26.18	80
	PM ₁₀	0.36	62.5	62.86	100
	PM _{2.5}	0.14	26.4	26.54	60
Khopad Khurd	SO ₂	6.01	13.3	19.31	80
	NO _x	8.65	22.2	30.85	80
	PM ₁₀	1.19	59.4	60.59	100
	PM _{2.5}	0.47	25.8	26.27	60

Table 8 shows that the impacts from the proposed SEZ project and TPP are well within the NAAQS. Therefore, there will be no adverse impacts on the agricultural productivity of the nearby areas. Highly efficient air pollution control systems will be adopted to mitigate particulate matter as well as gaseous emissions in the ambient environment.

Waste Management

Waste during construction activity relates to excess cement mix or concrete left after work is over, rejection caused due to change in design or wrong workmanship etc. These are normally re-used as filling at the same site after completion of excavation

work. Demolition and/or construction waste will be utilized in road construction wherever possible.

Excavated earth during the civil works including road construction, fencing, drainage, site levelling etc., shall be utilized within the project site. Topsoil shall be conserved and will be utilized in the areas earmarked for greenbelt development.

Solid waste will be generated from both the PA and NPA in the proposed SEZ project. The estimates from the PA are: 49.30 MT/day of Industrial waste and 5.16 MT/day of Municipal Solid Waste and estimates from NPA are: 16.72 MT/day of solid waste during operational phase. The majority of waste shall be generated by residential, commercial and institutional sources and activities such as street sweepings and drain cleaning. The biodegradable and non-biodegradable waste shall be collected, segregated, transferred, and disposed off as per the Solid Waste Management Rules 2000.

The expected quantity of horticulture waste has been estimated to be 3.30 MT/day, comprising of fallen leaves and other vegetative material.

Tentative quantity of hazardous waste generated from the proposed project will be approximately 4.48 MT/day depending upon the nature and scale of industries that are likely to come up in near future.

The E-waste is likely to be generated two years after the occupancy phase of the project. IT industries in the proposed SEZ will not be promoted; hence, E-waste generation will be minimal.

Green Area Development

Open spaces and avenues in the TPP and SEZ will have suitable plantation. Indicator plants will be planted to monitor the impact of air pollutants at various distances in dominant wind directions.

A greenbelt will be developed under project areas with the strip of plants along the roadside, around major structures of project and open spaces. The goal of installation a greenbelt would be to maximize both ecological functionality and scenic beauty of the area. The selected species will be indigenous and should have dust & noise tolerant, enhance aesthetics and develop a habitat for wildlife. Ideal size of greenbelt shall be between 15 and 80 meter wide and run the length of roads, major structures and open spaces. A good average will be about 20 meter wide which depends on the availability and topographic conditions of land.

A plantation of sound and dust receptor as well as aesthetically valuable species is proposed which will help in reduction of pollution (both atmospheric & noise), reduction of stress and beautification of the area. Hardiness, longevity, a minimum of wind through and breakage, attractiveness and minimal maintenance requirement are some qualities of species which are to be taken into consideration during selection. A standard spacing of 3m and 2m for tree and shrub species respectively will be taken into consideration, whereas the pit size will be recommended as 45 cm x 45 cm x 5 cm for trees and 30 cm

x 30 cm x 30 cm for shrubs. The cost included as planting material, farm-yard manure, tree guards, watering during dry spell.

Rainwater Harvesting

Efficient rain water harvesting systems coupled with storm water drainage will augment water for use and will replenish the ground water table. Run off from the total areas will be considered and designed to accommodate peak hourly rainfall.

RCC pipes of minimum 400 mm in size will be used to carry the storm or run off to the rain water harvesting system as suitable provision in our scheme to ensure better recharging of underground water table.

Storm water from terraces and other open and green areas will be collected through rainwater down take pipes and connected to nearest deep drain with pipes. The rain water will be collected by catch manholes with minimum depth of 600 mm and slope of 1:350 towards main drain with 300 mm diameter PVC pipes and PCC cover. Open drains with perforated RCC cover will be placed at every 3 m interval. The channels will lead into water bodies located at different locations within the SEZ premises. The run-off from roads will be provided with pre-treatment units like screenings, de-silting chamber, filtration Media, Oil & grease removal and settling and Bye-Pass arrangement.

Annual rainwater harvesting potential has been estimated to be 1647524.14 m³.

Approximately 70 number of double-bored rainwater harvesting pits will be required in the proposed project to collect the rainwater. Main emphasis given in the planning of the storm water drainage system is on recharging the underground aquifer of the area while having the safe disposal of storm water without flooding the site. A network of storm water disposal drains will be planned which will finally dispose off into a percolation well for direct injection of collected storm water into the ground water.

Baseline Conditions

The monitoring of the existing environmental conditions of the proposed project site and of its close vicinity have been established with respect to physical, biological and Socio-economic environment. The air quality of the area meets the prescribed NAAQS for the gaseous parameters. The background noise levels were also found within the standards as at present most of the area is not developed.

The water quality also meets all standards for use in domestic and industrial applications. In addition to that there is no sensitive ecosystem in the vicinity.

Environmental Impacts and Mitigation Measures

Environmental impacts have been assessed considering present environmental setting of the project area, nature, and extent of the proposed activities. Suitable approach and methodology was adopted to ascertain likely impacts during design, construction and operation stage. Valued environmental components were identified during initial site visit followed by its detailed investigation during later stage of the study.

Impacts are identified for the two stages of the project development: construction and operation stage. Since IIL is the developing agency for the proposed SEZ Project, the impact associated with its activities are directly associated with the construction stage of activities. During the operation stage of activities in the SEZ, direct impact will be associated with the proposed industries in the SEZ and only indirect impacts will be associated with IIL.

The main source of air pollution in the operational phase of the proposed SEZ Project will be stacks from the engineering industry. However, the emissions will be controlled through the use of tall stack heights and use of proper air pollution control devices. The waste generated from the engineering industry is mostly recyclable or waste lubricating oils that are also sold out to recyclers. These aspects are considered in planning stage and zoning the area. NPA is located in the south-ward direction wherein the predominant wind direction is east-west. The green belt and thick tree plantation are provided all along the periphery of the PA to provide a natural barrier.

Considering the nature of development, impacts are likely to be related primarily to land use, water resources, and air pollution. Most of the impacts identified are localised in nature and can be minimised through appropriate mitigative measures. The impacts during operation stage by individual industries will be controlled and minimised through strict adherence to industry specific Minimum National Standards (MINAS) and appropriate pollution control measures.

The project entails various impacts on the study area, some negative and some positive. The impacts will be caused by the construction activities as well as by the other industrial activities during the construction and operation phases, respectively. Various impacts identified during the study have been provided mitigation measures for a better environmental management. In addition to that, the roles and responsibilities of the developers have also been given in the EMP to monitor the implementation of the EMP to ensure the mitigation of adverse impacts.

Environmental Management Plan

The Environmental Management Plan (EMP) is the synthesis of all proposed mitigation and monitoring actions, set to a time frame with specific responsibility assigned and follow-up actions defined. EMP is a plan of actions for avoidance, mitigation and management of the negative impacts of the project. Environmental enhancement is also an important component of EMP. A detailed set of mitigation measures have been compiled in view of the likely impacts associated with the proposed development in Nashik SEZ. Mitigation measures have been suggested for both the construction and operation phase of the project.

The environmental management within the proposed industrial area will be based on a two tier system, which will include environmental management cell of IIL and all the industrial units of the proposed SEZ project.

Institutional Aspects and Responsibility Matrix

IIIL is committed to environmental protection and has accordingly started strengthening its organisational set-up. An environmental Management Cell has been created at Head office headed by GM level person. This cell not only looks after all legislative compliance related issue but also contributes for environmental planning and improving the environmental performance of the respective industrial area as well.

The environmental management is the combined responsibility of both IIIL and the individual industries concerned. The responsibility matrix regarding the Environmental Management of the project proponent and individual industrial units to come up in the proposed SEZ area are presented in Table 8.

Table 8: Responsibility Matrix of the Project Proponent and Individual Industries

Activity	IIIL	Individual Industries
Site Preparation	No	Site preparation will be done by individual units
Fencing	SEZ area fencing	Fencing of individual plot by respective industrial unit
Development of Approach Road	Will be done by IIIL	No
Road Construction	Internal Roads of the SEZ	Internal Road within Individual Plots
Green Area Development	Green Area outside the Plots, Parks & Road-side plantation	Green Area inside the individual plot as per MPCB guidelines
Grid Sub-Station	The construction for the TPP has already started and GSS will be set up. The TPP will supply power to the occupants of the SEZ.	No
Power Supply Line	Will be developed by IRL (co-developer)	No
Water Supply	Fresh water supply will be provided by MIDC for SEZ.	No
Drainage System	Will be developed by IIIL	No
Rainwater Harvesting	IIIL will provide rainwater harvesting structures linked with the storm water drainage system in the SEZ area.	Individual industrial units will also be encouraged to provide rainwater harvesting structures within their respective plots.

Activity	IIIL	Individual Industries
Wastewater Treatment Facility	No	Individual Industrial units will install their own wastewater treatment facility and comply with Zero Discharge
Sewage Treatment	IIIL	Industries as well.
Municipal solid waste disposal facility development and maintenance	Sinnar Municipal Corporation	-
Waste Collection Centre and Treatment facility	Commercial Waste Collection Centre will be provided by IIIL in Service Area	Individual Industries will develop their own system of Waste Management
Pollution abating equipment	No	Individual Industries will install their own pollution abating equipment as per their process requirement
Source: Details evolved with IIIL		

Recommendations

Based on the environmental impact assessment conducted, the following recommendations are made:

- Systems of periodic auditing and reporting shall be adopted during the construction period to ensure that the contractors adhere to the EMP.
- The project proponent should effectively follow the suggestions made in the EMP and/ or any other environmental measures so as not to damage the environment of the project area.
- Occupants of the proposed SEZ shall have to adhere to the conditions stipulated in the environmental clearance as well as in consent/ authorization from MPCB.