

PROJECT PRE-FEASIBILITY REPORT

FOR

**PROPOSED TO DEVELOP INDUSTRIAL PARK (IP) AND MULTI
PRODUCT SEZ**

**[Schedule 7 (c) Category “A” as per EIA notification 2006 and its
amendment thereof]**

At

Villages: Pakhajan, Ambhel and Limdi, Taluka: Vagra, Dist.: Bharuch,
Gujarat.

Land Area: 715.00 Hectares

APPLICANT

DAHEJ SEZ LIMITED

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March – 2022

Doc. No.: 2021_ECSS_EIAMS_210003

1.0 Introduction about the Project/ Background Information

1.1 Project Background and Objective

The Industrial growth of Gujarat is unprecedented in the last one decade and precisely it is more in areas in Bharuch district in the recent past. Over the years, Gujarat has retained its position as the manufacturing sector growth engine. Gujarat has consistently formulated policies /schemes and have developed infrastructure to facilitate the growth of various manufacturing sectors. By doing this the state has not only been able to make contributions in the country's GDP but also develop industries and infrastructure that would contribute to the nation's exports.

Promoting manufacturing through development of industrial parks, creation of specialized infrastructure, development of Special Economic Zones etc. have been some of the most prominent measures taken by Government of Gujarat for stimulating industrial growth.

At present there are 16 industrial estates located in Bharuch district. The approximate area allotted by GIDC is 11374 hectares as on January 2021. Over 11,500 units of small and medium enterprises, involved in different sectors, such as chemicals and petrochemicals, textiles etc. are present in the district.

India was one of the first Asian countries to adopt EPZ model for promoting exports. Kandla EPZ in Kutch district of Gujarat was established in 1965. Gujarat was first state to formulate state SEZ policy. Gujarat also ranks first in terms of total area covered by SEZs in India.

Implementation of favorable State SEZ policy, healthy and competitive environment of growth in business, epicentre for attraction of FDI are some of the key reasons for operations of 21 SEZs (~81% of total SEZs) within Gujarat.

Gujarat accounts approx. for 13% share of the manufacturing sector of India. The state also accounts approx. 20% export share of India. In terms of export-oriented infrastructure, Dahej SEZ, Surat SEZ & Kandla SEZ is the top 3 operational SEZs of Gujarat and prominent ones within India. Looking at the industrial growth in the past and future development, Dahej SEZ Limited (DSL) has proposed Industrial Park & Multi Product SEZ (SEZ) to ensure requirement of rapid industrialization.

Petrochemicals, Chemicals & Pharmaceuticals holds ~54% share of manufacturing in Gujarat. In terms of investments, Bharuch district has attracted ~25% of the total investments, almost all of which are in the mentioned sectors. Specifically, Dahej has been identified as Petroleum, Chemicals and Petrochemicals Investment Region (PCPIR) further promoting the growth of these sectors within the region.

Considering the expected rise in the businesses of units operating within the Dahej-Bharuch region, increase in the exports, the Government's agenda of import substitution and "Make in India" initiatives, Dahej SEZ Limited (DSL) has proposed to develop Industrial Park and Multi Product SEZ

in total area of 715.00 Hectares at Villages: Pakhajan, Ambhel, Limdi, and, Taluka: Vagra in Bharuch District.

1.2 Details of Project Proponent

Dahej SEZ Ltd. (DSL) is a company registered under the companies act, 1956 and is promoted jointly by Gujarat industrial development corporation (GIDC) and Oil & Natural Gas Corporation (ONGC) for development of Special Economic Zone (SEZ).

The SEZ Phase- I was established in an area of approximately 1682 Hectare divided into two parts termed as DSL-I (of 1200 Ha) and DSL-II (of 462 Ha).Both DSL-I and DSL-II are having valid EC from MoEF&CC and operational since 2008-2009.

No.	Particulars	Details
1	Name of the Company	Dahej SEZ Limited
2	Registered Address	Block No.14, 3rd Floor, Udyog Bhavan, Sector 11, Gandhinagar, Gujarat 382017
3	Contact person and email	Mr. Piyush K. Mankad Email: ceo@dahejsez.com Email: info@dahejsez.com
4	Details of Proposed Industrial Park	Infrastructure Development - Industrial Park and SEZ
	Location	Village: Pakhajan, Ambhel, Limdi, Ta: Vagra, District: Bharuch, Gujarat
5	Details of Category of Industries to be housed	Synthetic Organic Chemicals, All types of chemicals, Automobile, Lubricating oils-Grease and petroleum based products, lead acid battery manufacturing, Glass, Pesticides, Petrochemicals, Fertilizers, Pharmaceutical, Oil, Gas, Refinery, Distillery, Dyes, paints, Pigment, Intermediate, Aircrafts, Helipad, Specialty Chemicals, API, Bulk Drug, Research and testing, Plastic and Plastic Processing, recycling/reprocessing/recovery/reuse of Waste, Organics, Inorganic, Bio-technology, Textiles, Engineering, Heavy engineering, Solar, Renewable Energy, Wooden, Handicraft, Medical devises, Textile, Metal Industries , Food & Food processing, types and tubes, electrical, electronics, rubber, ceramics, FMCG, Warehousing, items related to defense sector, Pulp and Paper, explosives, Chlor alkali, Chemical Fertilizers, metallurgy, Mechanical fabrication/ manufacturing/Assembling, Cement Plants, Plastic industries, Electronic Industries, etc.

1.3 Project Brief

Dahej SEZ Limited (DSL) has proposed to develop industrial park and Multiproduct SEZ in total area of 715.00 Hectares at Villages: Pakhajan, Ambhel and Limdi, Taluka: Vagra in Bharuch District. Village wise bifurcation of the same is given in below table.

Sr.	Village	Total Survey Nos.	Area (in Ha.)
1	Ambhel	230	475.76
2	Limdi	29	37.76
3	Pakhajan	78	171.58
Total		337	685.10
Roads + Kash + Ponds + Canals			29.90
Grand-total			715.00

1.4 Applicability of Environment Clearance

The proposed project will accommodate industries that fall under the purview of Environmental Clearance, which is categorized as A and B as per EIA notification and having area more than 500 Ha (715 Hectares), hence proposed project falls under Schedule 7(c) – “Industrial estates/parks/complexes/areas, export processing Zones (EPZs), Special Economic Zones (SEZs), Biotech Parks, Leather Complexes” Category-A. Hence, Environment Clearance needs to be obtained from MoEFCC.

The categories will mainly be polluting as well as non-polluting industries including Synthetic Organic Chemicals, Pesticides, Petrochemicals, Fertilizers, Chlor alkali, Chemical Fertilizers, metallurgy, Mechanical fabrication/ manufacturing/Assembling, Cement Plants, Plastic industries, Electronic Industries, etc.

2.0 Project Details

2.1 Need for the Project

The demand for industrial space in the vicinity of Dahej is growing steadily due to favorable industrial climate. The industrial estates developed by GIDC and DSL in the vicinity of Dahej have been fully augmented. Hence, there is a need for augmenting industrialspace for attracting new industries in that area.

Looking to the advantages available within the SEZ, many domestic and foreign companies have expressed interest in setting up unit within DSL.

Moreover, existing Industries located in nearby industrial estate also planning for expansion and look forward to establish their proposed expansion in the new industrial park.

Therefore, Dahej SEZ Limited (DSL) has proposed to develop industrial park and Multi Product SEZ in total area of 715 Hectares at Villages: Pakhajan, Ambhel and Limdi, Taluka: Vagra in Bharuch District.

2.2 Demand-Supply

As of March 2022, Gujarat has 248 Sanctioned Industrial Estate out of which 182 are operational SEZs.

The economic growth indicators of Gujarat have been impressive with an achievement of an average annual growth rate of 10.4 % in the last five years, a figure that is higher than that of the "Asian Tigers". Gujarat contributes to 16% of the industrial production of the country and has also mobilized the highest share (12.7%) of the investments. Gujarat ranks high in the manufacturing sector.

Looking at the industrial growth in the past and future development, DSL has proposed industrial estate to ensure requirement of rapid industrialization.

2.3 Project Size and Type

The Proposed Industrial Park & SEZ in total area of 715 Hectares at Villages: Pakhajan, Ambhel and Limdi, Taluka: Vagra in Bharuch District.

The Industrial Park will accommodate industries that are classified for Environment clearance and are categorized as Category A and B as per EIA Notification 2006. Industrial Park will also accommodate other industries that are not classified in the EIA Notification 2006 but classified by Gujarat Pollution Control Board (GPCB) vide Red, Orange, White and Green category.

The IP and SEZ will develop the area into two broad categories, a) Processing area b).Non processing area.The processing area shall encompass industrial plots for establishment of industries and Non Processing area shall comprise of Infrastructure amenities like Administration office, Custom Office, Bank, Health Center, Fire stations, Parking, Greenbelt, STP, Solid/Hazardous waste storage area etc.

The IP and SEZ shall also provide proper paved road network easy internal movements, Water supply network, storm water & drainage network, effluent conveyance network, Rain water harvesting system, etc.

2.4 Location of Proposed Project

DSL has proposed to set up an Industrial Park and SEZ Area at Taluka: Vagra, District: Bharuch.Bharuch is located in the southern part of Gujarat, near the Gulf of Khambhat in Arabian Sea. Leveraging the existing industrial base, Bharuch attracts a large number of business conglomerates. There are 8 Taluka in Bharuch district and Vagra taluka offers strategic geographical location for the proposed industrial park along with the availability of required manpower, Road and utility infrastructure.Key map of project location is given as **Figure-1**. Toposheet of the study area is enclosed as **Annexure 1**.

Table 1: Co-ordinates of the Project

Corners	Longitude	Longitude
A	21°49'54.36"N	72°41'56.20"E
B	21°49'36.64"N	72°41'42.06"E

C	21°49'5.94"N	72°41'38.94"E
D	21°48'33.84"N	72°41'51.24"E
E	21°48'6.52"N	72°41'57.35"E
F	21°47'28.11"N	72°42'23.19"E
G	21°47'41.33"N	72°43'1.15"E
H	21°47'43.50"N	72°43'0.26"E
I	21°47'45.25"N	72°43'5.98"E
J	21°47'52.55"N	72°43'32.07"E
K	21°47'55.71"N	72°43'31.21"E
L	21°47'57.17"N	72°43'36.44"E
M	21°48'1.52"N	72°43'35.38"E
N	21°47'56.45"N	72°43'20.57"E
O	21°48'22.12"N	72°43'18.39"E
P	21°48'15.06"N	72°42'52.43"E
Q	21°48'45.98"N	72°42'50.04"E
R	21°48'47.18"N	72°42'37.96"E
S	21°49'7.01"N	72°42'42.80"E
T	21°49'28.32"N	72°42'47.73"E
U	21°49'39.14"N	72°42'47.69"E
V	21°49'39.58"N	72°42'42.05"E
W	21°49'42.17"N	72°42'43.68"E
X	21°49'45.64"N	72°42'43.26"E
Y	21°49'54.20"N	72°42'25.34"E
Z	21°49'56.09"N	72°42'11.24"E



Figure 1: Satellite Image of the Proposed Site- Long View

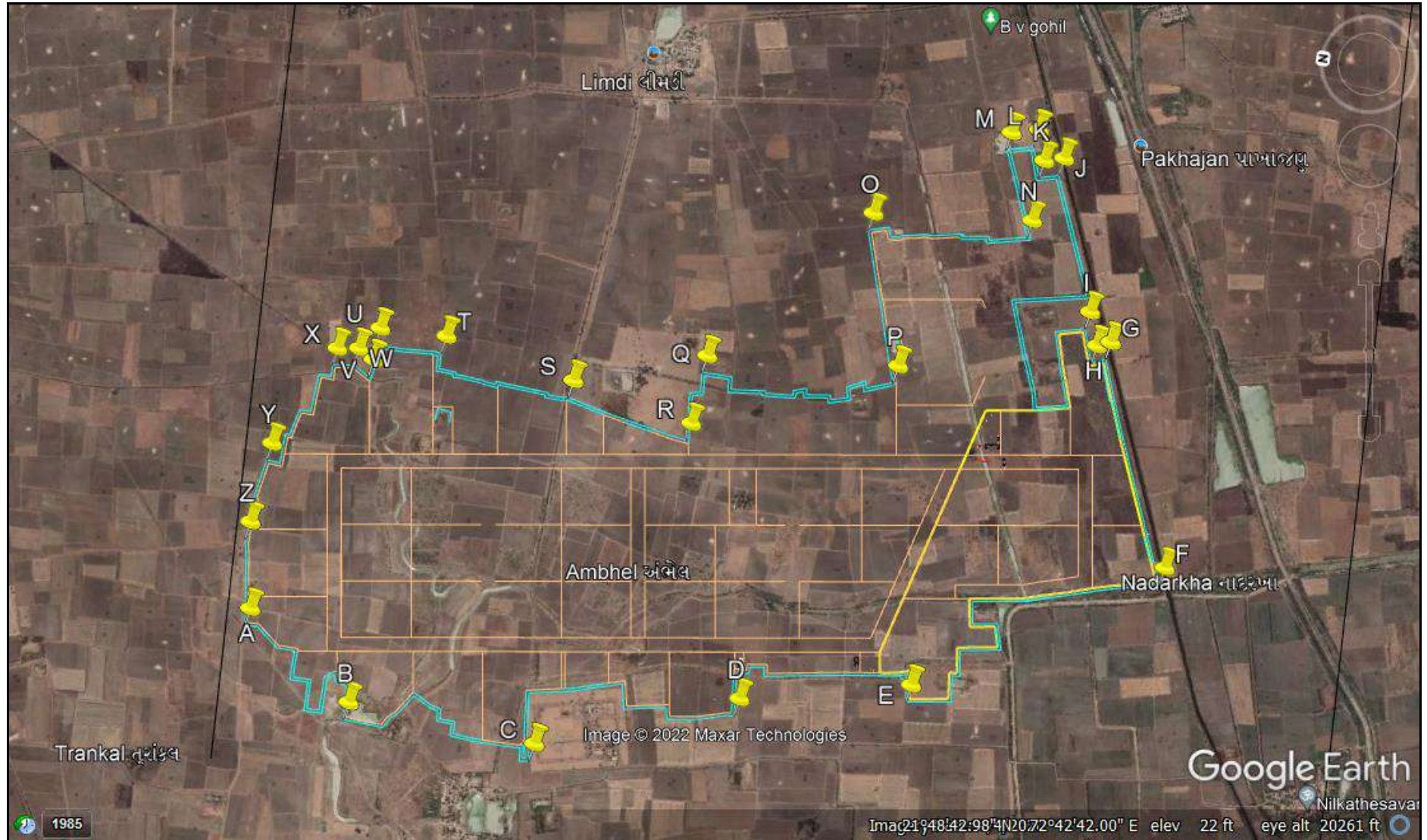


Figure 2: Satellite Image of the Proposed Site- Short View

2.5 Project Area and Cost

The Proposed Industrial Park will be developed in 715 Hectares of land, which covers three villages i.e. Pakhajan, Ambhel and Limdi, Taluka: Vagra in Bharuch District. Total cost of the proposed project will be 1294.00 crores.

Table 2: Project details

No.	Particulars	Details
a	Total Land Area in Ha.	715.00 Ha
i)	Total Area for IP	590.19 Ha
ii)	Total Area for SEZ	124.81 Ha
b	Saleable Area	
i)	IP Saleable Area	448.69 Ha
ii)	SEZ Saleable Area	96.77 Ha
iii)	Total Saleable Area of IP and SEZ	545.46 Ha (76.29% of 715.00 Ha)
c	Non-Saleable Area	
i)	Non-Processing Zone for SEZ	2.76 Ha
ii)	Area for Services	53.45 Ha
iii)	Green Belt	94.48 Ha (13.21% of 714.50 Ha)
iv)	Roads	17.02 Ha
	Total Non-Saleable Area	169.54 Ha (23.71% of 715.00 Ha)
d	Infrastructure Highlights	Roads Network Length: 19.71 Km Water Source: 366 MGD (1385 MLD) reservoir of GIDC located at Rahiyad appx. 20 km from site. Estimated Water requirement: 36 MLD Water reservoir with 5 days storage capacity: 180 MLD Water supply network of 23.97 Km within Industrial Park Effluent Collection Sump: 25 MLD Effluent Disposal Network CETP Dahej at 25 Km from the Industrial Park Power sourced from GETCO and Torrent power Estimated Power requirement: 355 MW Common Buildings: Commercial Complex, Banks, Post Office, Administration and Custom building, Canteen, Health Center, Fire Station etc.
e	Project Cost in Rs. Crores	1294 Crores

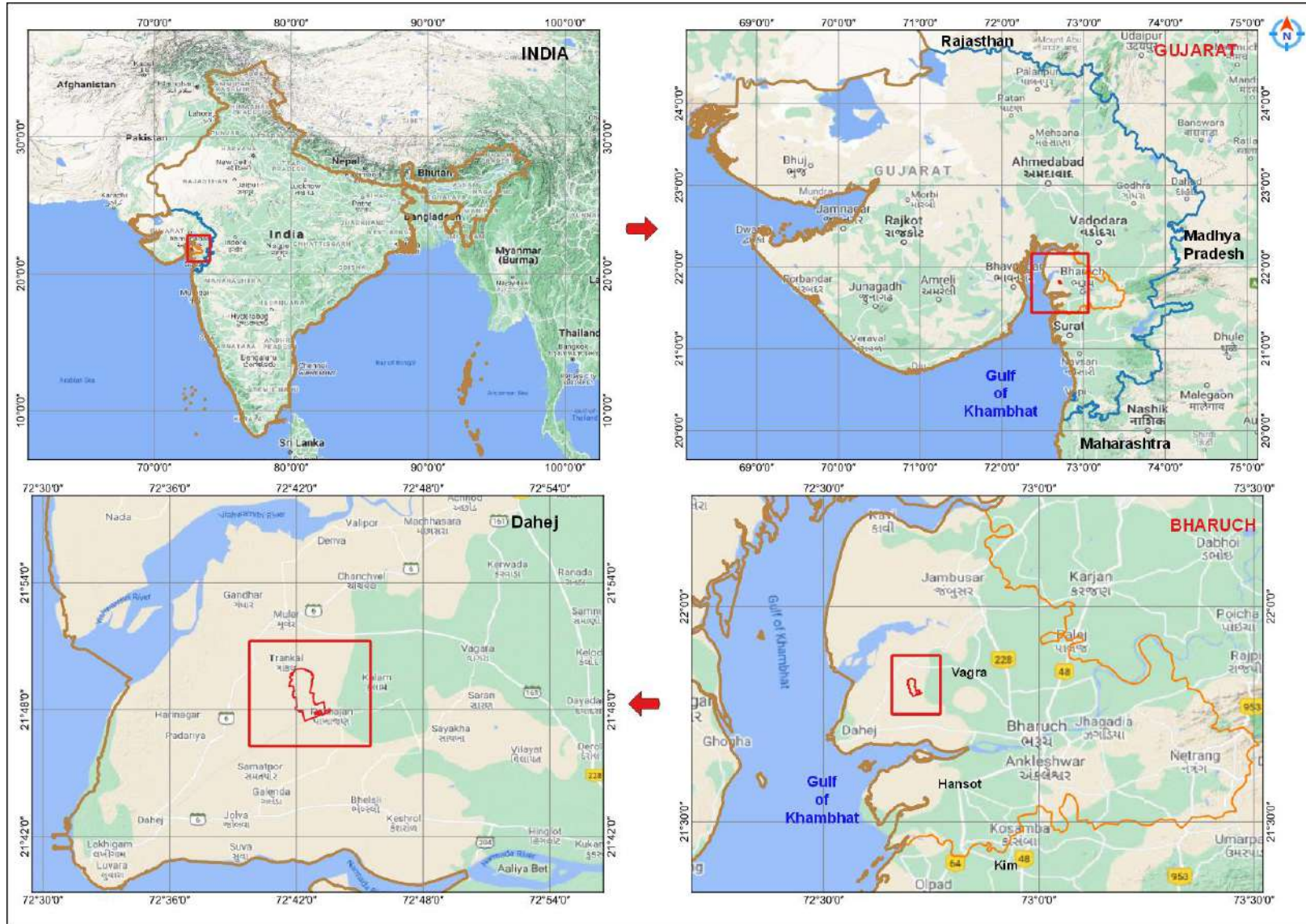


Figure 3: Key plan of Project location

2.6 Consideration of Alternate Sites

Preliminary reconnaissance survey was carried out for various sites to establishment of industrial park and multi product SEZ in and around the Bharuch District in Gujarat. Based on the availability of land, resources, connectivity & matching the environmental conditions three sites were shortlisted. A comparative study was carried out for three sites and proposed site was found idly suitable for proposed Industrial Park and Multi product SEZ.

3.0 Locational Analysis and Justification of Site

3.1 Bharuch District

(a) Bharuch District is located in South Gujarat region along the West coast of India. Bharuch district is bounded by Gulf of Khambhat in west, on east by Narmada district, on south by Surat district and on north by Anand and Vadodara district.

(b) Total geographical area of Bharuch district is 6,509 sq km which is approximately 3.32% of total geographical area of Gujarat State. Out of the total area 170 sq km (2.62%) is urban area whereas 6,339 sq km (97.4%) is rural area.

The brief outline of Bharuch district is presented in the following table:

Table 3: Brief Outline of Bharuch District

Geographical Location	72.45° to 73.15° East (Longitude) 21.30° to 22.00° North (Latitude)
Area	6,509 Sq. Km 3.32% of total area of Gujarat State
District Headquarter	Bharuch
Talukas	08
No. of Panchayat/Villages	543/653
Demographic	
Population	Total: 15.51 lakhs Male: 8.05 lakhs, Female: 7.45 lakhs
Population density per Sq. km	238
Sex Ratio (Per 1000)	925
Total Average Literacy rate	81.51%
Average Rainfall	800 mm
Seismic Zone	Zone III
Major River	Narmada
Social Infrastructure	<ul style="list-style-type: none"> • 850 primary, 118 secondary and 55 higher secondary schools • 1,408 seats in total 17 ITIs offer several industrial training • 32 primary health centres (PHC), • 8 community health centres • (CHC) and 1 civil hospital

3.2 Regional Connectivity of Bharuch:

3.2.1 Road Connectivity:

NH-8 passes through the district which connects Bharuch with Ahmedabad at a distance of 182 km, Mumbai – 362 km and other major cities of Gujarat like Vadodara, Surat and Valsad.

3.2.2 Rail Connectivity:

Broad gauge railway line of 50 km is operational and well connected to all talukas of district. Bharuch station is an important railway junction connecting Delhi and Mumbai in north south direction. It is also an important part for Delhi-Mumbai Industrial Corridor.

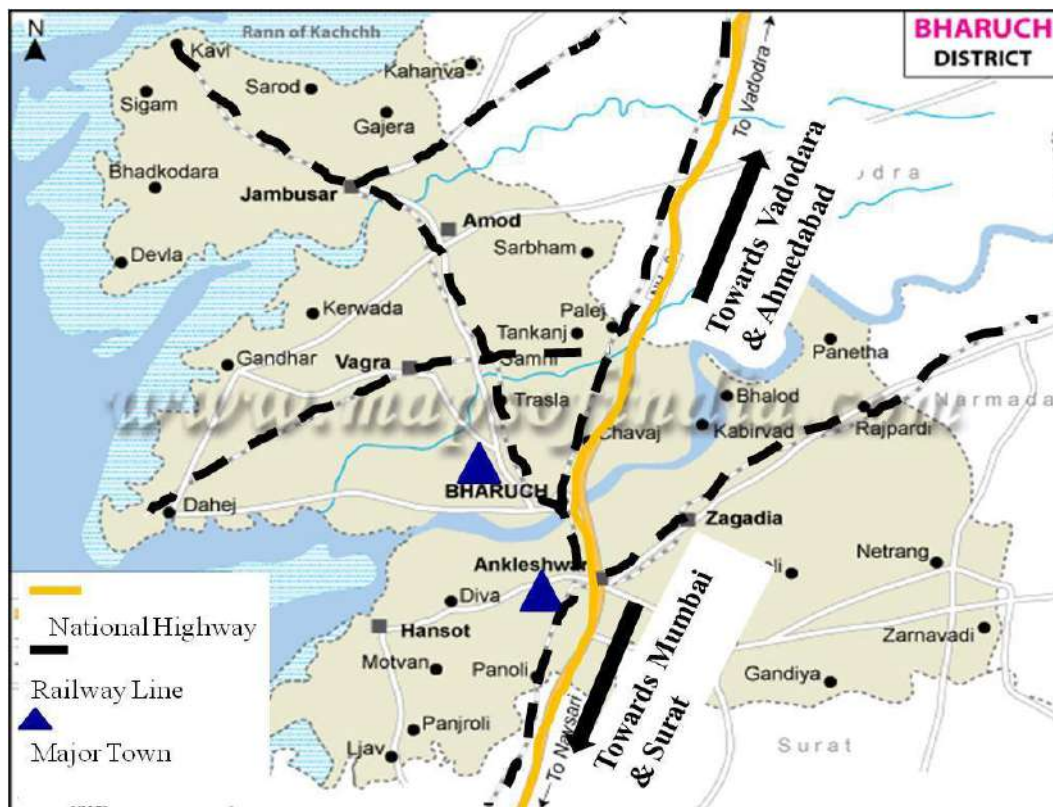


Figure 4: Road and Railway Connectivity Map of Bharuch

3.2.3 Port Connectivity:

Spread over 5,000 Ha. of land and with excellent access to entire north-west Indian hinterland, Dahej is strategically located at a distance of around 400 km north of Mumbai. The presence of existing industrial estates such as Bharuch, Ankleshwar and Panoli has enhanced the locational attractiveness of the region. Various port terminals are established in Dahej.

The existing terminals operational at Dahej are mentioned below:

- (i) Dahej Port operated by Gujarat Maritime Board
- (ii) Petronet Adani – a cargo terminal with capacity of 11.7 MMTPA
- (iii) Gujarat Chemical Port Terminal Company Limited – 1.8 MMTPA
- (iv) Petronet LNG Limited (Gas Terminal) – 12.5 MMTPA

- (v) Reliance Liquid fuel jetty – 2.12 MMTPA
- (vi) Ro-Ro Terminal facility from Dahej (Bharuch) to Ghogha (Bhavnagar)
- (vii) Magdalla Port operated by Gujarat Maritime Board is located at 85 kms from Bharuch
- (viii) Two Jetty in port area of Dahej SEZ developed by M/s. ISGEC and M/s. Godrej.

Other ports which are operational in Gujarat are Pipavav, Kandla, Mundra & Hazira.

3.2.4 Air Connectivity:

Nearest domestic airports located at Vadodara and Surat are at a distance of 90 km and 85 km respectively. Ahmedabad International Airport is located at a distance of 250 km from Bharuch.

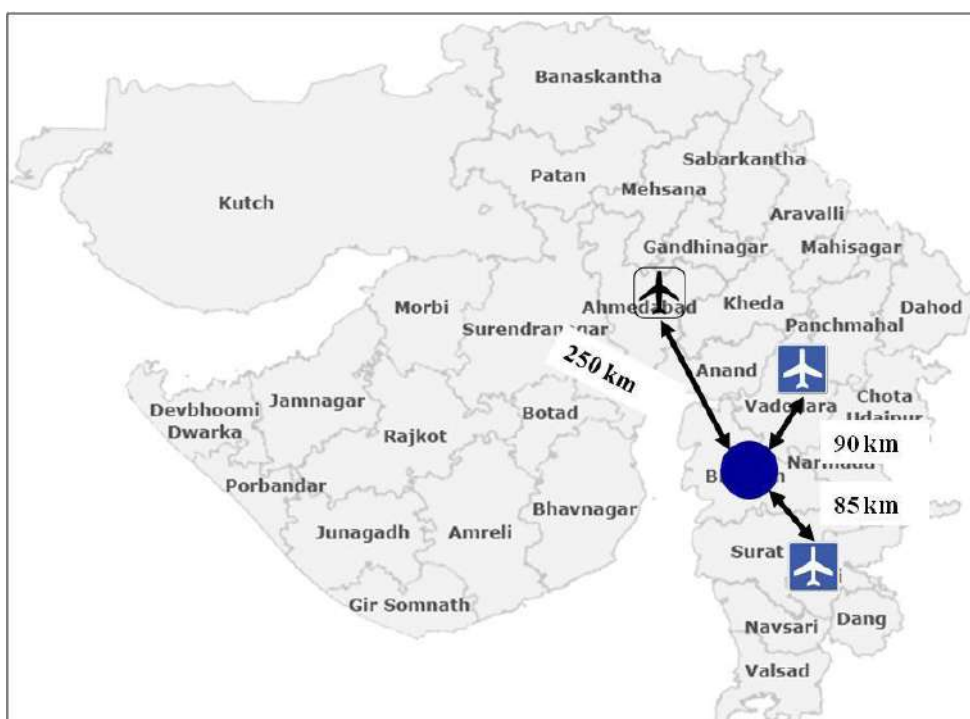


Figure 5: Air Connectivity from Bharuch

Source: Maps of India

Table 4: Locational connectivity

No.	Particulars	Details	
a	Locational connectivity	Key Location	Distance from Proposed Industrial Park
		Dahej Port	26.5 Kms
		Dahej SEZ Part- I	21 Kms
		Bharuch Town	39 Kms
		Sayakha GIDC	10 Kms
		Freight Rail Line	Pakhajan Railway Station- 1 km
		Proposed PCPIR road corridor connecting Dahej	0.75 kms

		and Bharuch	
		Ahmedabad- Mumbai Six Lane NH -48	35 Kms
		Nearest Domestic Airport	Vadodara- 70 Kms Surat – 85 Kms

4.0 Industrial Base in Bharuch:

The district witnesses a large number of industrial estates and Special Economic Zones (SEZ). Leveraging the existing industrial base, Bharuch attracts a large number of business conglomerates.

4.1 Industrial Estates

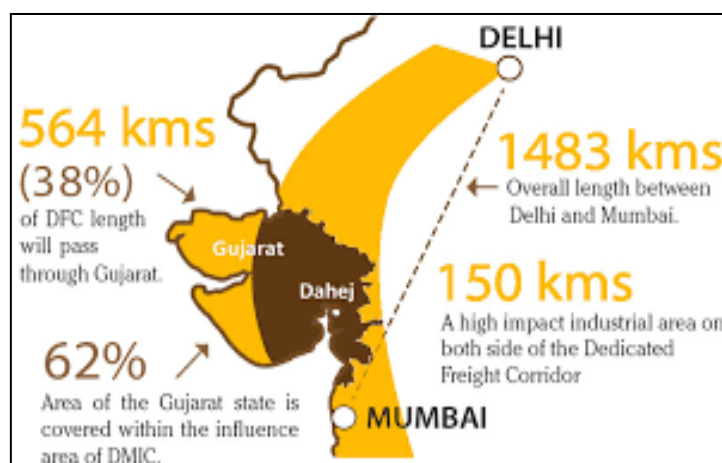
At present there are 16 industrial estates in Bharuch district. The approximate area allotted by GIDC is 11374 hectares as on January 2021. Over 11,500 units of small and medium enterprises, involved in different sectors, such as chemicals and petrochemicals, pesticide, pharma, textiles etc. are operational in the district.

4.2 DMIC and Gujarat PCPIR

Government of India is developing a Dedicated Freight Corridor (DFC) linking Delhi, Mumbai, Kolkata and Chennai. This DFC passes through six states in India, of which, Gujarat accounts for 38% (564 km) of total DFC length (1,483 km). The influenced area of 150 km on either side of DFC is being developed as “Delhi Mumbai Industrial Corridor” (DMIC).

Almost 62% of total area of Gujarat State would be benefited by DMIC development. The State government identified 82 links in the DMIC Influenced area to upgrade them into two/four lane carriageway offering connectivity between ports, industrial estates, hinterlands, markets and points of agricultural produce.

Gujarat PCPIR region, Dahej SEZ and passing of DMIC are expected to further fuel the industrial and economic growth of the district.



Gujarat PCPIR is one of the 4 PCPIRs declared by Ministry of Chemicals and Fertilizer, Government of India under PCPIR policy 2007 as an investment region planned for establishment of production

facilities for petroleum, chemicals and petrochemicals. It is located at Dahej, Bharuch near Gulf of Khambhat.



4.3 SEZ in Gujarat:

India was one of the first Asian countries to adopt EPZ model for promoting exports. Kandla EPZ in Kutch district of Gujarat was established in 1965. Gujarat was first state to formulate state SEZ policy. Gujarat also ranks first in terms of total area covered by SEZs in India.

Implementation of favorable State SEZ policy, healthy and competitive environment of growth in business, epicentre for attraction of FDI are some of the key reasons for operations of 21 SEZs (~81% of total SEZs) within Gujarat.

Gujarat accounts approx. for 13% share of the manufacturing sector of India. The state also accounts approx. 20% export share of India. In terms of export-oriented infrastructure, Dahej SEZ, Surat SEZ & Kandla SEZ is the top 3 operational SEZs of Gujarat and prominent ones within India.

Table 5: District wise distribution of formally approved SEZ

Sr.	Districts	Formal Approvals	In-principle approvals	Notified SEZs	Total Operational SEZs (Including prior to SEZs Act + under the SEZs Act)
1	Ahmedabad	6	0	6	4
2	Amreli	1	0	1	1
3	Bharuch	5	1	4	4
4	Gandhinagar	5	0	5	4
5	Jamnagar	1	0	1	1
6	Kutch	3	2	2	3
7	Mehsana	1	0	0	0
8	Surat	0	0	0	2
9	Vadodara	3	0	3	2
10	Valsad	1	1	0	0
GRAND TOTAL		26	4	22	21

Source: <http://sezindia.nic.in/>

4.4 SEZ in Bharuch:

The detail of SEZs operational and approved in the district of Bharuch is presented in the following Table which implies the availability of support infrastructure as well as manpower and favorable geographic location for industries to grow.

Table 6: Details of SEZs

Sr.	Name of Developer	Location	Type of SEZ	Remark
1	Dahej SEZ Limited	Taluka: Vagra, District Bharuch,	Multi Product	Operational
2	Sterling SEZ and Infrastructure Limited	Jambusar, District Bharuch,	Multi Product	Operational
3	Jubilant Infrastructure Limited	Villages Vilayat and Vorasamni, Taluka Vagra, District Bharuch,	Chemicals	Operational
4	HBS Auto and Anc SEZ Pvt. Ltd.(Formerly HBS Pharma SEZ Pvt. Ltd. (Formerly J.B. SEZ Pvt. Ltd.)	Village Panoli, Taluka-Ankleshwar, District-Bharuch, Gujarat	Automobile, Automobile ancillary & Engineering	Operational
5	Gujarat Hydrocarbons and Power SEZ Limited-Kolkata	Village Vilayat, Taluka Vagra, District Bharuch	Oil and gas	Formal Approvals
6	Anique Infrastructure Private Limited	Village: Pakhajan, Limdi, Kesvan, Padalpor and Trankal, Taluka Vagra, District Bharuch	Multi Product	In-Principal Approval

Source: <http://sezindia.nic.in/upload/uploadfiles/files/d.pdf>

➤ **Profile of Vagra**

Vagra is a Taluka located in Bharuch district of Gujarat. It is one of 8 Talukas of Bharuch district.

Table 7: Brief outline of Vagra Taluka

Particular	Detail
Area	1643.91 Sq Km
Talukas	08
No. of Villages	68
Demographic	
Population	Total: 1.04 lakhs Male: 0.53 lakhs, Female: 0.47 lakhs
Population density per Sq. km	61
Sex Ratio (Per 1000)	925
Total Average Literacy rate	70.47%

The following tables provide the detail of industrial estates in the taluka.

Table 8: Details of Industrial Estates

Sr.	Name of Industrial Estate	Allotted land in Lakh Sqm till end of year	Total no. of plots
1	Atali	43.2	201
2	Saykha	209.5	1433
3	Dahej-I	440	188
4	Dahej-II	380	696
5	Dahej- II	141	226
6	Vilayat	120.82	57

Source: Statistical Branch, Bharuch

The Vagra taluka offers strategic geographical location for the proposed industrial park along with the availability of required manpower, Road and utility infrastructure.

The area in and around Bharuch city is densely populated and industrially well developed. The availability of large plots of land along with required rail-road connectivity, availability of power, fuel and manpower is crucial in the success of medium and large industrial projects. However, Availability of such large parcel (715 Hectares) of land with good Rail, Road and Port Connectivity along with availability of gas grid and power is rare in the area. The proposed industrial park can fulfill such needs which will enable the Government of Gujarat to achieve targeted investment by medium & large export-oriented units in the State.

5.0 Justification of Site

The Proposed Industrial Park (IP) is located at a prominent site with an area of approx. 715 hectares, 26.5 kms away from the Dahej port and 21 km away from the existing Dahej SEZ part-1. Bharuch town is about 39 kms from the proposed site. The proposed land falls under villages viz. Pakhajan, Ambhel and Limdi in Vagra Taluka of the Bharuch District.

- The proposed site is well connected with National Highway (NH-48) and Railway both are having excellent connectivity to New Delhi, the National Capital and Mumbai, the commercial Capital of India.
- The proposed site is located 1 km away from the existing Vagra – Atali road (on the south), 3.5 kms from Dahej-Gandhar State Highway (SH-06) on the east and 1.5 kms from Pakhajan – Keshavan road (on the west).
- The Existing six-lane, Dahej-Bharuch Highway (SH-6) is only 13 Kms from the proposed site location.
- The 120 m wide road corridor has been planned under Petroleum, Chemicals and Petrochemicals Investment Region (PCPIR), which is at a distance of about 1 km to the south site.
- Dahej - Bharuch Railway Line is adhering the southern edge of the proposed location, with Pakhajan Railway station on this rail line in close proximity of 1 km from the site.
- The 120 mts wide road corridor proposed under the PCPIR umbrella, connecting Dahej and Bharuch, is only 0.75 KM from the south edge of the site.

Dahej SEZ Part-I	21 Kms
Bharuch Town	39 Kms
Sayakha GIDC	10 Kms
Freight Rail Line	Pakhajan Railway station- 1km
Proposed PCPIR road corridor (120 mtrs wide) connecting Dahej and Bharuch	0.75 kms
Vadodara	90 Kms
Surat	115 Kms
Ahmedabad-Mumbai Six Lane- NH no. 48	35 Kms
New Express way connecting Ahmedabad and Mumbai	22 Kms
Nearest Domestic Airport	Vadodara – 97 Kms, Surat - 125 Kms.

Freight Rail line – A broad-gauge railway track and Pakhajan railway station are located on the southern side of the proposed industrial park.

The Port of Dahej is about 26.5 kilometers from proposed industrial park, which is now being In addition to existing four other port facilities at Dahej, owned by Petronet LNG Limited (including a bulk terminal sub-concessioned to Adani), GCPTCL, ONGC OPAL, Birla Copper, Torrent Pharmaceuticals and Reliance Industries. This provides excellent port connectivity. With the proximity of Dahej port, it makes an attractive investment destination in various industrial sectors like pharmaceuticals, petrochemicals, chemicals, fertilizers, engineering, etc.

6.0 Site Analysis

6.1 Existing Site Features

The existing site features in terms of profile of land, terrain, roads, trees, water features, existing HT lines, existing gas line is discussed herewith:

6.1.1 Profile of land

A land of approx. 4.5 km length by 1.4 km width, with an uneven faceted periphery, admeasuring to a total of approx. 715 hectares. Bharuch-Dahej Freight Railway Line is adjoining the south edge of the land profile. It is a flat waste land adjoining ONGC pumping station & Pakhajan railway station (on Dahej freight rail line).

6.1.2 Terrain

Flat terrain with a gradual slope of 0.6 mts along the length of site with south edge being lower than the north edge

6.1.3 Existing Road

6 m wide existing bituminous village road corridor (east-west) passes through the proposed site location and is connecting the Limdi village with Goladra village, in turn leading to the Dahej – Gandhar State Highway (SH-06). This village road breaks the site in two distinct unequal slices. There is another access dirt road (parallel to the railway line) leading to the ONGC pumping station, near the south boundary of the site location.

6.1.4 Existing Trees and Vegetation

Currently, the proposed SEZ Location has scarce trees distribution for the size of parcel and no distinct vegetation as well. As per the survey drawing of the land, only 69 trees (i.e. 1 tree in an average of 10 HA. of land) are present on the available land and hence this project can be taken up without destroying the existing trees as well as vegetation.

Moreover exhaustive tree plantation and greenbelt development shall be planned as per guidelines.

6.1.5 Existing HT electric Lines and ONGC Pipe-Line

The site location has three distinct HT lines of capacity – 66KV, 220KV & 400 KV each, passing through the land in criss-cross fashion, as marked in the figure below. In addition, a number of ONGC pipelines also runs within the proposed land boundary in diagonal fashion between ONGC Gas Gathering Station GGS-08 and ONGC pumping station.

6.1.6 Existing Water bodies

The site being near the Narmada River basin has high water-table. Also, there are seasonal rain water channels (Kash) passing through the land boundary to allow the rainwater to flow through the land during the Monsoon season. A defunct irrigation canal branch is constructed on the western edge of the land. Apart from that, there are few small seasonal water bodies/ponds as marked in the below figure.

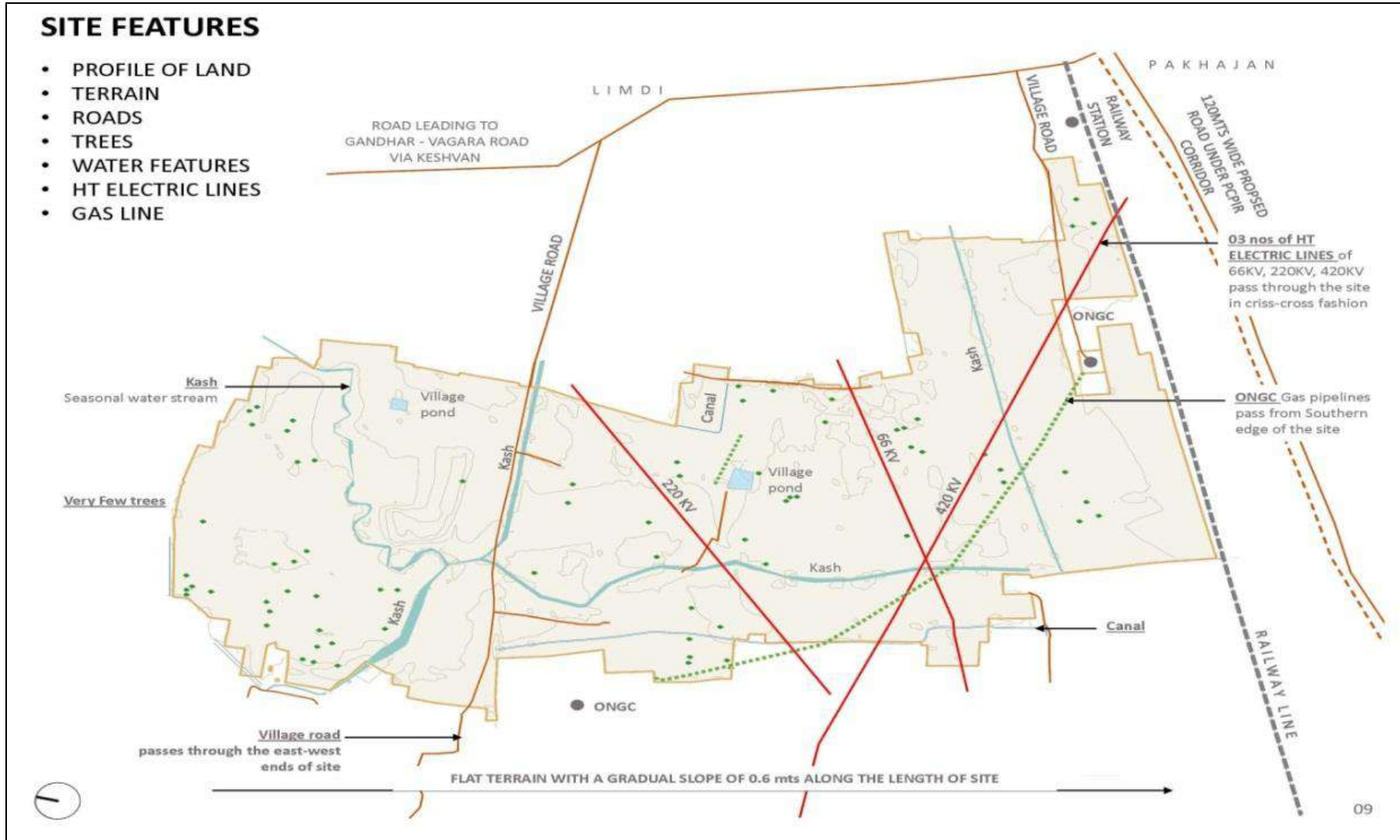


Figure 7: Existing Site Features

6.2 Land Area Distribution

Dahej SEZ Limited (DSL) has proposed to develop industrial park comprising of SEZ and Domestic Tariff Area (DTA) in total area of 715.00 Hectares at Villages: Pakhajan, Ambhel and Limdi, Taluka: Vagra in Bharuch District.

Note: Approximately 125 Ha. land area of out the total area of 715.00 Ha is earmarked for the proposed multi-product SEZ. The present report discusses all the infrastructure which will be common for the both the areas.

The approximately saleable land comes at 76.29% (i.e. 545.46 Ha) which will be for industrial purpose and balance 23.71% land area is non-saleable and to be used for various services/utilities common to both the areas. The detail is given in the following table 10.

Table 10: Indicative Land Area Distribution

Sr.	Particular	Area in Hectares	Area in Acres	% of total
1	Industrial Park Saleable (Part-1)	247.00	610.35	34.55
2	Industrial Park Saleable (Part-2)	201.69	498.39	28.21
3	SEZ Area: Saleable	96.77	239.12	13.53
	Total Saleable Area (1+2+3)	545.46	1347.86	76.29
	Non-Saleable			
4	Services - Area			
4(a)	Area in Industrial Park	53.45	132.08	7.48
4(b)	Area in SEZ	1.83	4.52	0.26
5	Non- Processing Zone of SEZ	2.76	6.82	0.39
6	Green Belt	94.48	233.46	13.21
7	Roads	17.02	42.06	2.38
	Total Non-Saleable Area (4+5+6)	169.54	418.94	23.71
	TOTAL	715.00	1766.80	100.00

6.2.1 Saleable Land

Total saleable land of 545.46 ha has been considered for both the areas. The plot size distribution is made based on the discussion held with DSL.

The plots have been divided in three categories i.e., below 20 Acres, 20 to 30 Acres and above 30 Acres. Further, proposed modular plots can be amalgamated into large plots to match the requirement. The details of plots are given in the Table 11.

Table 11: Indicative Detail of Plots

Sr.	Particular	No. of Plots
A	Industrial park	

1	Less than 20 Acres	6
2	20 to 30 Acres	29
3	Greater than 30 Acres	8
	Total No. of Plots	43
B	SEZ	
1	Less than 20 Acres	2
2	20 to 30 Acres	4
3	Greater than 30 Acres	3
	Total No. of Plots	9
	Total (A + B)	52

6.2.2 Non-Saleable Land

The non-saleable land area comes at approximately 169.54 Ha. has been provided for the industrial park for common infrastructure facilities as follows:

Common Plots for Utilities, Services, Admin Building, Health Center, etc.

Two common plots admeasuring to total land area of 9.35 Ha have been provided in the planning of the industrial park at strategic location as well as near to the Entrance Security / Custom Clearance Gate of the SEZ. One plot will house common amenities for DTA like the admin building, common facilities centre (CFC), Banks, Courier/Post Office, Primary Health Centre, Canteen, Place for Police/Security, etc. These amenities will not only be useful to the industries, but also to serve the nearby villages. Some part of this zone has also been kept as ‘garden/landscape’ area for beautification purpose, in turn aiding in the marketability of the project. The other plot under the non-processing area of SEZ and in proximity to the entrance gate of the SEZ will accommodate its admin office, custom clearance office and other related facilities required for SEZ.

The indicative area earmarked for the common services/utilities for the industrial park is given in the following table:

Table 12: Indicative Area Allocation for Services in DTA

Sr.	Plot No.	Area in Hectares	Services Proposed
1	C1	2.37	Existing Village Pond, it is suggested to develop as a landscape feature of the project.
2	C2	9.06	Effluent Collection Sump/CETP, located at the north-west of the park to avoid issues of fumes affecting nearby habitats in the village due to south-western winds
3	C3	6.59	Common plot of DTA for Common Amenities, Admin, CFC, Canteen, Primary Health Centre
4	C4	10.14	Water Reservoir and Pumping Station
5	C5	0.40	DG sets
6	C6	5.57	Power Sub-Station and Fire Station
7	C7	1.01	Boiler
8	C8	3.82	Existing Village Pond, it is suggested to develop

			as a landscape feature of the project.
9	C9	0.71	Plot comprising of the existing ONGC well/valve
10	Services in Road Corridor	16.31	The area is earmarked for services which goes along the road corridor, comprises of network of effluent pipe, water supply, gas, electrical, ELV, Optical fibre, Storm water channel, Steam Network and Kash re-routing network.
	Total	55.28	

Non- Processing Zone of SEZ

Sr.	Plot No.	Area in Hectares	Services Proposed
1	D1	2.76	Non Processing Area of SEZ for Common Amenities, Administration office, Custom Office, Bank, Health Center, Parking etc.

Note: total Plot number, their size and directions are tentative. DSL may change plot no. and its area, layout, direction as per requirement of customer.

6.2.3 Roads and Green belt

The land area allocated for the road networks is 17.02 Ha (i.e. 2.38% of total area) and the area for development of green belt for the industrial park is 94.48 Ha (i.e. 13.21% of total area). The greenbelt adjoining the boundary of industrial plots will be maintained by an owner of the respective plot. The remaining greenbelt area will be maintained by DSL. The DSL will implement the necessary mechanism regarding the same.

Proposed Infrastructure Components/Facilities

The infrastructure facilities are based on the requirement of industrial park & multi-product SEZ. The basic infrastructure facilities proposed are as follows:

- Road Net Work and related Earth Works
- Electrical Works including solar lightings
- Development of Public Health Engineering (PHE) System,
- Site Development including boundary wall
- Common Buildings
- Storm Water, Sewage drain, STP

The services planned within industrial park will remain common for both areas (i.e. Industrial Park and SEZ) and it is located outside proposed SEZ area.

6.3 Land Acquisition Status

GIDC has acquired land (Approx. 517 Hect.) for above said project of Dahej SEZ Limited and balance land (Approx. 176 Hect.) is under acquisition by competent authority. Land Acquisition Status details are given in below table.

Table 13: Land Acquisition Status

Sr. No.	Name of Villages	Land Acquired (Approx. area in Hect.)Private Land	Land under Acquisition (Approx. area in Hect.) (Government + Private land)	Total Area (Approx. area in Hect.) (Government + Private land)
1	Limdi	38-82-51	0-91-36	39-73-87
2	Pakhajan	109-46-75	62-10-95	171-57-70
3	Ambhel	362-98-34	113-12-97	476-11-31
Total in Hect.		511-27-60	176-15-28	687-42-88
Roads + Kash + Ponds + Canals				29.90

Details of Land Acquisition Status is enclosed as **Annexure 2**.

7.0 Resource Requirement

7.1 Electricity/Power Requirement

The estimated electrical load requirement comes at 355 MW as per the standard requirement of the industry to come in the proposed industrial park. The Power requirement will be sourced from GETCO and Torrent Power. The basis of arriving at the estimated connected load is given in the following:

Table 14: Basis of Electrical Power Requirement Estimation

Sr.	Particular	Plot Area (Ha)	Area (Sq. meter)	Usage area %	Electrical Area	Load W/Sq. Mtr	Connected Load in MW	Demand Load in MW 80% DF
1	Industrial Park and SEZ Area	545.46	5454600	60%	3272760	100	327.28	261.82
2	Common Utilities/ Services	32.37	323700	50%	161850	100	16.19	12.95
3	Non-Processing Zone	9.35	93500	25%	15875	50	0.79	0.64
4	Road	16.52	165200	40%	66080	5	0.33	0.27
Total		603.70	6037000	52%	3516565	88	344.59	275.68

The total electric load requirement is worked out on the basis of size and type of the industry. Total 2 nos. of transformers of 250 MVA rating (i.e. total -500 MVA) are proposed be installed considering load requirement.

7.2 Cost of Proposed Project

DSL has proposed to develop an Industrial Park Industrial Park and Multi-product Special Economic Zone (SEZ) in area of 715.00 Hectares at Villages Pakhajan/Ambhel/Limdi Village, Taluka: Vagra, District: Bharuch. The total estimated cost of project works out to be Rs. 1294.00 crores.

7.3 Manpower Requirement

During the construction phase around 700-1000 nos. of people will be required; preference will be given to local villagers. Manpower will be required for Civil Construction, Mechanical erection, Electrification, Piping Works and Associated Amenities.

During the operation phase, individual member industries will generate employment for skilled and unskilled workers.

In the absence of details on member industries, it is difficult to assess the employment generation. However, DSL envision creating employment opportunities for 5000-7000 peoples (Including Industries to come in Industrial Park & SEZ of varied qualified and competence, directly in the proposed IP). Moreover, the proposed IP & SEZ will enable atleast 2500 peoples to have some means of employment indirectly to support the activities of the member industries.

8.0 Water Requirement and Wastewater Generation

8.1 Water Consumption

After exploration of many options for source of water in consultation with DSL and GIDC, 366 MG reservoir of GIDC located at Rahiyad is identified as source of water for the proposed industrial park & SEZ which is located at a distance 20 Km from the proposed site.

The estimated water demand for manufacturing and non-manufacturing area, services, and green belt arrives at 36 MLD. Concurrence letter for water supply is enclosed as **Annexure 3**.

8.1.1 Water Pipe line and Pumping

The specification of incoming water supply pipe line are ERW MS pipe with 406 micron inside epoxy coating and 40 mm thick outside gunniting and dia 610 mm. To supply 36 MLD (i.e. 1.50 ML/hr), 2 Nos. of working pump (i.e. Split Casing and Horizontal Type) + 1 No. as standby are proposed, each with a pumping capacity at 1000 m³/hr.

8.1.2 Water Reservoir

Additionally, water storage in form of pond with a capacity of 180 MLD is also proposed to cater emergency water break down demand for 5 days. The size of the pond is estimated at 265 mt x 265 mt x 3.0 mt to meet the storage requirement. To ensure minimise seepage, the bed area of the pond is proposed to be covered by polyethylene (HDPE) film of 1000 micron.

8.1.3 Water Supply Network and Water Meter

The water will be supplied from reservoir to individual plots through a ring mains. The length of total water supply network within industrial park is estimated at 23.97 Km. The cost of water supply network is inclusive of excavation, valve & valve chambers, manhole and necessary items.

2 Nos. of working pump (i.e. Split Casing and Horizontal Type) + 1 No. as standby are proposed, each with a pumping capacity at 1000 m³/hr to meet the requirement of 36 MLD (1500 m³/hr fresh water demand). To record the water consumption, Smart Water meter (Nos. 65) with SCADA system configuration is proposed to be installed at the individual plots.

8.2 Effluent Generation

The effluent generated from the manufacturing area will be collected in the collection sump after final treatment. The collected effluent will be pumped to CETP, Dahej for further treatment and ultimate disposal to sea. Concurrence letter for the discharge of effluent into CETP Dahej is enclosed as **Annexure 3**. The basis of effluent generation is given in the following table:

Table 15: Quantity of Effluent Generation

Zones	Area in ha.	Total water demand in KLD	% of Recovery	Effluent Generation in KLD
Manufacturing Area	545.46	38,182	65%	24,818
			Say	25,000

Considering effluent generation at 65% of estimated water demand from manufacturing zone, the effluent generation comes at 25.00 MLD. The generated effluent after final treatment will be collected in the collection sump by gravity. To minimize the issue of pipe blockage, the velocity of the effluent is considered between 0.9 m/s to 1.1 m/s with single pipe system. The effluent collection pipe proposed is Corrugated DWC HDPE Class SN 8, structural wall polyethylene pipe type. The total length of effluent collection pipe network is estimated at 49.67 Kms considering single pipe system.

The capacity of collection sump is taken at 25 MLD considering maximum 2 days storage has been proposed in the IP. Adequate space has also been allocated for effluent collection sump, STP and Hazardous waste storage area.

In case of the solid/hazardous waste generation, individual unit owners will have to manage the waste generated and tie up with the solid/hazardous waste management service provider of the industrial park & SEZ.

8.2.1 Effluent Disposal to CETP, Dahej (Outside SEZ)

Effluent generated will be pumped to CETP Dahej at distance of 25 Km from proposed site. The length of the disposal pipe from collection sump to CETP Dahej is 25 km, single pipe line length. For disposal, the HDPE pipe with 710 mm diameter and PN 100/PN16, with single pipe system is proposed to minimise issue of pipe blockage due to scaling.

4 Nos. of submersible pump with 2 nos. of pump working and 2 nos. of pump stand by, each with a flow of 1100 m³/hr is proposed to meet the effluent disposal requirement of 25.00 MLD (i.e. 1042 m³/hr). The cost of effluent disposal network is inclusive of cost of excavation, valves and necessary items.

9.0 COST OF PROJECT AND FINANCIAL VIABILITY

9.0 Overall Project Cost

DSL has proposed to develop an Industrial Park Industrial Park and Multi-product Special Economic Zone (SEZ) in area of 715.00 Hectares at Villages Pakhajan/Ambhel/Limdi Village, Taluka: Vagra, District: Bharuch. The total estimated cost of project works out to be Rs. 1294.00 crores. The above project costs have been worked out up to 31.03.2025. The detail is given in the following table:

Table 16: Estimated Cost of Project

Particular	Till 31.03.2022	To be incurred	Total Cost Crores
Land Cost (A)	500.00	188.00	688.00
Infrastructure Development Cost (B)			
Site Development & Land Scaping work	-	35.57	35.57
Road Works	-	63.07	63.07
Electrical Works (Including HT Line Shifting) *	-	26.04	26.04
PHE System	-	319.29	319.29
Other Necessary Utilities	-	27.62	27.62
Sub-total of Infrastructure Development Cost (B)			471.59
Admin & other Expenses (C)	-	8.94	8.94
Interest Cost	30.68	47.40	78.08
PMC & TPI Charges @ 5% of Infrastructure development cost	-	23.58	23.58
Contingencies @ 5% of Infrastructure development cost	-	23.81	23.81
Sub-total of (C)			134.41
Total (A+B+C)	530.68	763.32	1294.00
<i>*It is assumed that the cost of Electrical works to the tune of Rs. 165.26 crs shall be borne by Co-Developer, hence cost to that extent is not taken in cost of project.</i>			

10.0 Liability of IP and Industries

10.1 Liability of Industrial Park

- DSL will develop industrial plots for the required size to suit the industrial activities and will provide power, through its centrally organized power supply grid.

- DSL will provide main roads with 7 meter width with a central meridian to have greenery.
- DSL will provide water storage and supply network, Common effluent Treatment Plant (CETP) and deep sea disposal line.
- DSL will provide and Tele communication system and storm water network.
- DSL will provide compound wall and security gate around the IP boundary.
- DSL will also provide canteen area, Admin building and customs house, Commercial complex like Shops, Bank, Offices.
- DSL will also provide Fire-station and Primary health centre for emergency situation.
- DSL will also developed laboratory facility for monitoring of environmental parameter from member industries.
- DSL will develop Environmental Cell, Emergency Management Cell and Common Health Surveillance System.
- The proposed IP will not have any exclusive residential area/township/colony.
- DSL will form a special purpose vehicle (SPV) for environmental management (water treatment, testing and analysis, effluent/ sewage treatment, solid and hazardous waste management, air pollution control, greenbelt development & maintenance)
- Installation, maintenance and operation of Common Effluent Treatment Plant/ Sewage Treatment Plant.
- To maintain & operate the CETP as per GPCB/ CPCB norms
- Storage & disposal of solid and hazardous wastes generated from CETP.
- Compliances to environmental clearance and CC&A conditions
- Compliance of all the statutory requirements as well as implementation of the EMP during the operation phase within the processing as well as non-processing areas.
- Interface for effective environmental management between individual units and SEZ authority through regular meetings, updates and awareness programmes.

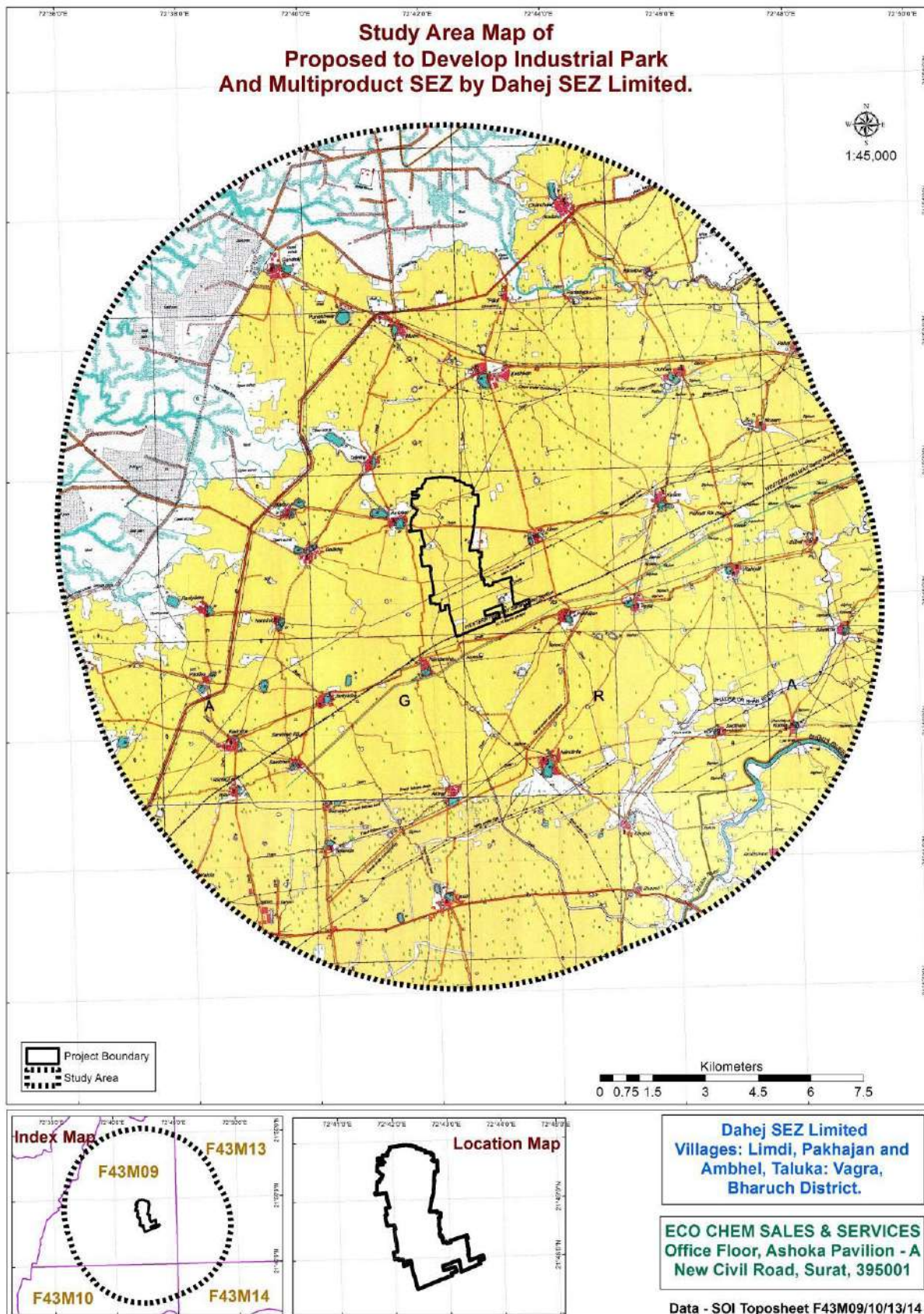
10.2 Liability of Individual Industries

- The industry shall provide the Detailed Project Report (DPR) delineating the raw materials, manufacturing/production process, utilities and other infrastructures before starting the production.
- The company shall commit for pollution control measures in respect of water/wastewater, air/emission, solid/Hazardous waste and noise in line with respective MoEF Standards and GPCB Guidelines.
- DSL will mandate all member industries to treat their wastewater and maximum reuse it by recycling in the avenues of utilities like boiler, domestic conveniences and green belt development.
- DSL will mandate all member industries to treat their wastewater in own ETP and after confirming to the CETP inlet it will go to CETP for further treatment and ultimate disposal.
- The industries shall Create holding capacity for storage of treated effluent (2 days)

- Storage, handling and disposal of solid & hazardous waste generated at its plant. Hazardous waste disposal to authorized hazardous waste disposal facility or recyclers.
- The industries shall provide details on energy conservation measures, adhering to ECBC 2005.
- The industries shall provide Risk analysis and RMP as per Chemical Accident Rules.
- The industries shall commit for minimum guarantee for providing employment for the peoples in the project impact area.
- The industries will develop green belt for atleast 33% of the acquired plot area.
- The industries shall provide measures for rain water harvesting structures.
- The industry shall provide the frame work on its Corporate Environmental and Social Responsibilities for resources management and pollution control.
- The industry shall project its independent organizational settings for Environmental Up gradation and monitoring with exclusive annual budgetary allocation.
- Industries will be mandated to commission their activities only after obtaining necessary clearance & permits as per the applicability of legal requirement.
- Industries will Co-ordination with the SPV/ SEZ authority for effective environmental management


Annexure 1

Toposheet of Study Area




Annexure 2

Land Acquisition Status



Gujarat Industrial Development Corporation
(A Govt. of Gujarat Undertaking)

Office of the Divisional Manager
3rd Floor, Asian Trade Centre,
Comm. Plot No. 320/2, Asian Paint Circle,
GIDC, Ankleshwar-393 002.
Phone: +91-02646-221351, 221451, 221403
Fax: +91-02646-251451 Email-dmcc@gidcgujarat.org



Date: 25 FEB 2022

No. GIDC/DM/ANK/ 44 By RPAD

To:
 ✓ Chief Executive Officer
 M/s. Dahej SEZ Ltd.
 Block No. 14, 3rd Floor,
 Udyog Bhavan, Sector-11,
 Gandhinagar-382 017.

Sub: - Regarding land acquisition for proposed Multi Product SEZ & DTA (Industrial Park) at village Pakhajan, Ambhel & Limadi of Taluka Vagra, Dist. Bharuch.
Ref: - Your letter No. DSL/NEWPRPOPOSAL/2020/1342/173, dtd. 17-02-2022.


Dear Sir,


With respect to the above stated subject matter, we hereby clarified that GIDC has acquired the land (approx.511-27-60 Hact-Are-Sqmt.) for above said project of Dahej SEZ Ltd. and balance land (approx.176-15-28 Hact-Are-Sqmt. (Government + Private land) is under acquisition by GIDC as under: -

Sr. No.	Name of Village	Land Acquired (Approx. area in Hact.) Private Land	Land under acquisition (Approx. area in Hact.) (Government + Private Land)	Total Area (Approx. area in Hact.) (Government + Private)
1)	Limadi	38-82-51	0-91-36	39-73-87
2)	Pakhajan	109-46-75	62-10-95	171-57-70
3)	Ambhel	362-98-34	113-12-97	476-11-31
Total in Hact.		511-27-60	176-15-28	687-42-88

This is for your information please.

Thanking You,



Yours Faithfully,

 Divisional Manager
 GIDC, Ankleshwar.

Annexure 3

Concurrence letter for Water Supply and Discharge of effluent

