



Telangana State Industrial Infrastructure Corporation Limited

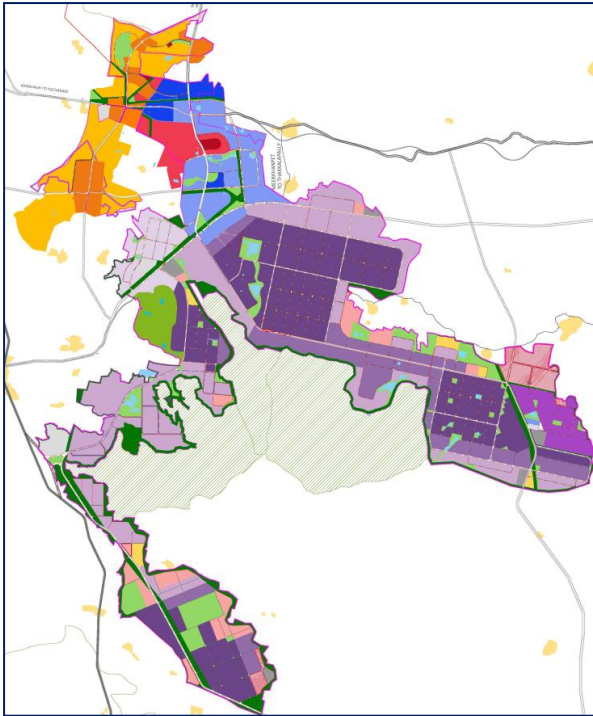
(A Government of Telangana Undertaking)

Executive Summary

For PROPOSED HYDERABAD PHARMA CITY

At

**Kandukur, Yacharam & Kadthal
Mandals of Ranga Reddy District
in the State of Telangana**



**Prepared by
Environment Protection
Training & Research Institute**

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EXECUTIVE SUMMARY

1.0 INTRODUCTION

Telangana State Industrial Infrastructure Corporation Limited (TSIIC), a 100% undertaking of the Government of Telangana State (GoTS), is the engine for industrial growth in Telangana. TSIIC functions with a mandate to provide industrial infrastructure and manages industrial land bank.

Hyderabad Pharma City aims to provide an integrated ecosystem for pharma manufacturing with the following major components:

- Pharma Manufacturing units
- Pharma City Township
- Pharma University
- Pharma Research & Development Facilities

Environment Protection & Training Research Institute, Hyderabad have conducted an Environmental Impact Assessment (EIA) for the proposed project and formulated an appropriate Environmental Management Plan (EMP) for the project.

2.0 PROJECT SITE LOCATION & CONNECTIVITY

The proposed **HYDERABAD PHARMA CITY** project is located in Kandukur, Yacharam and Kadthal Mandals of Ranga Reddy District in the State of Telangana. The proposed project site is located between Latitudes 16°54'1.18"N to 17°04'12.12"N and Longitudes 78°29'55.99"E to 78°39'23.74"E (Survey of India topo sheet nos. 56 K/8, 56 K/12, 56 L/5, 56 L/9 given in Table-1) with above average mean sea level (AMSL) of 640 m (2100 ft). There is no river flowing in & around the project site.

The nearest city Hyderabad, which is the capital of the state is located about 20 km in the northern side w.r.t. the project site. Shadnagar Railway Station is around 38 km from the project site. The Rajiv Gandhi International Airport (RGIA) is located 21 km to the north of Pharma City Site (32 km distance by road from site boundary) at Shamshabad.



The Hyderabad Pharma City (HPC) can be accessed from Hyderabad via Srisailem Highway as well as Nagarjunasagar Highway. The site falls along the Kandukur-Yacharam Road which connects above two highways along Kandukur and Yacharam. Besides, National Highway 44 and Hyderabad Outer Ring Road also connect the proposed HPC site. Besides the above roads, many village roads are also connecting to the HPC.

The following four freeway corridors have been proposed in the HPC site which passes through various land uses to provide coherent traffic movement.

- **Corridor – 1:** Spandana (approx length:13.2 Km)
- **Corridor – 2:** Eastern Freeway (approx length:12.8 Km)
- **Corridor – 3:** Southern Freeway (approx length: 9.8 Km)
- **Corridor – 4:** Northern Freeway (approx length: 7.1 Km)

Besides, peripheral road is also proposed, which distributes the traffic from access streets to arterial and sub arterial roads. They are characterized by mobility and access equally.

Light Rail Transit (LRT) system is also proposed, which can facilitate public transportation within the HPC to cater to future needs. Besides, a rail spur line is proposed from southern side of HPC to Shadnagar railway station, which is located at a distance of 48 Km. The rail spur line is proposed to connect with the proposed freight Terminal at Timmapur and also with the proposed dry port at Jhadcherla.

3.0 PROJECT DETAILS

The principal features or highlights of the proposed project of **Telangana State Industrial Infrastructure Corporation Limited** under study are as follows:

Latitude/ Longitude	Latitude: 16°54'1.18 N to 17°04'12.12 N Longitude: 78°29'55.99" E to 78°39'23.74" E
Water Requirement	Gross Water Demand: 167.46 MLD Net Water Demand: 142.34 MLD (Source: Krishna Water Supply Scheme)



Power Requirement	985 MW Source: 250 MW on-site Gas based Co-generation Power Plant, 435 MW solar PV, 3 MW waste to energy power plant and the balance through the supply system of Power Grid Corporation of India Limited (PGCIL) and TRANS Co sub stations. For this, four GIS substation (220/132/33kV) are proposed to be developed to cater to the power demand of HPC.
Manpower Requirement	15.95 Lakhs
Waste Water Generation	66.39 MLD (Industrial Wastewater) 54.80 MLD (Domestic Wastewater)
Nearest Railway Station/ Airport	Shadnagar Railway Station/ Rajiv Gandhi International Airport, Shamshabad
Nearest Highway	NH-765(Srisailem Highway)
Nearest Town/City	Kothur/Hyderabad
Nearest Habitation	Kadthal
Project Cost	Rs. 5157.76 Crores

The HYDERABAD PHARMA CITY is proposed to be developed with integrated physical, environmental, social and technical infrastructure in an area of 19333.20 acres (7823.87 ha./ 78.23 sq.km) of land in Ranga Reddy District of Telangana State. Land acquisition details area given in Table-2.

Major portion of HPC land will be used for Pharma Manufacturing while the rest of the Pharma City land is proposed to be developed for a Pharma University, Pharma R&D and Ancillary Hub and Pharma City Township with all allied social and physical infrastructure.

The HPC site is divided into six zones for accommodating industrial and different non-industrial developments within the site.

The proposed concept Master Plan for Hyderabad Pharma City is presented in **Figure – 1.0**.

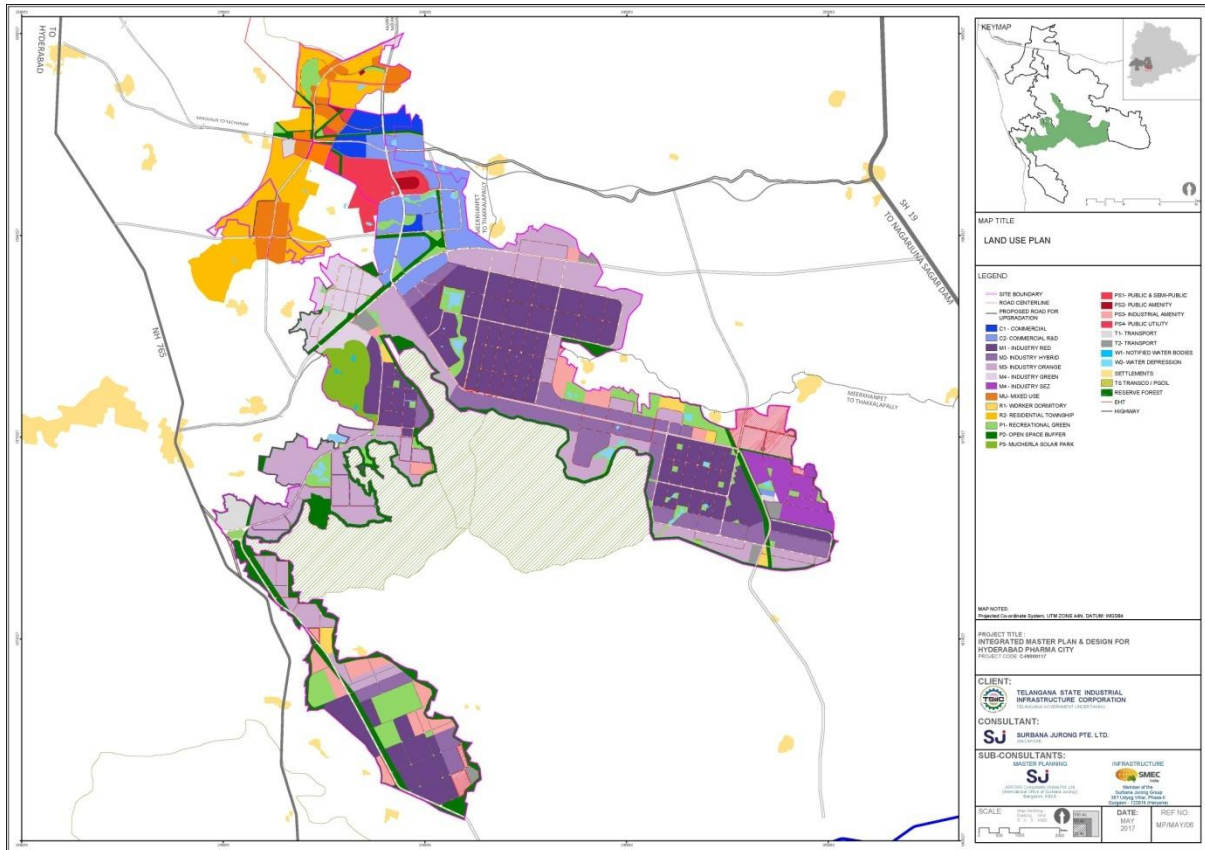


FIGURE –1.0 : CONCEPTUAL MASTER PLAN

The following are some of the infrastructure facilities that are proposed to be developed in the proposed Pharma City.

- Approach roads and internal roads with storm water drains
- Power supply and street lighting
- Water Supply
- CETP
- STP
- Technical training center/ R&D Center
- Common Facilities such as banks, post offices, telephone exchange and dispensaries etc.
- Power sub station
- Health Care facilities
- Housing Facilities
- Parks and Library for recreation
- Security Services

The proposed Pharma City site is a green field site with some agricultural pockets, scrub land and scattered rocky areas. As a first step of this development this piece of land would be dressed, made free of existing vegetation, leveled as per need for accommodating the proposed developments.

As per the guidelines for integrated industrial areas, 0 to 11° slope is buildable. Around 95% of the proposed site has a slope between 0 & 11° and is thus buildable. In the 95% buildable area, major portion have a slope between 0 & 2° of which 30-40% are boulders, rest are recognized as flat terrain due to undulating nature of the site, the cut and fill will be optimized to 100% and potentially be a zero disposal system. Smaller rocks will be converted into construction materials at sites, which can be used locally as stone walls, building finish and laying of roads and earthworks to create sustainable developments. Plots with Land use categories requiring larger floor areas are positioned in relatively leveled surface region of the site, while the higher slopes hold functions suitable on smaller plot sizes. The most undulating part of the site has been allotted for social infrastructure, university, to encourage innovative architecture using locally available and indigenous materials. Rocky terrain with unique stone forms and large boulders to be enhanced as community spaces, amenity centers and rock gardens. Attempts have been made to optimal usage of non-buildable areas as community spaces.

All mature trees at site will be preserved, or mandatory transplantation of the same on site will be made, if required.

For efficient utilization of water resource and minimize requirement of fresh water supply, it has been proposed that part of the total water demand of HPC will be met from tertiary treated waste water from proposed domestic sewage treatment plant and common industrial effluent treatment plants. The concept of 'Zero liquid discharge concept' shall be adopted.

In the HPC, mostly two types of waste water will be generated. It is domestic sewage from residential, institutional and commercial areas and industrial effluent from the Pharma industries. Domestic sewage is proposed to be treated in a domestic sewage treatment plant. Pharmaceutical industry effluent will be treated in several common effluent treatment plants proposed in different zones. Domestic sewage and industrial effluent after treatment will be recycled for flushing, irrigation for landscaping and green areas, HVAC, road washing, flushing of sewers, etc.

Total municipal solid waste (MSW) generation in HPC in ultimate phase has been estimated at about 164 TPD. Based on Final Report Submitted by Centre for Environment & Development, Green Origin Ventures Pvt. Ltd. and Lahmeyer GKW Consult GmbH "Inventorisation and Characterization of Hazardous Waste Categories in Andhra Pradesh and Telangana (Contract no: 1A1.1 of the World Bank funded CBIPMP, APPCB)", expected industrial solid waste from HPC would be in the order of 1.5 lakh TPA. The composition of Hazardous Waste (HW) includes recyclable portion (30%-40%), land disposable portion (50%-60%) and Incinerable portion (5%-10%).

For disposal and treatment of collected solid wastes, an integrated solid waste treatment facility is proposed with components such as treatment/stabilization, recycling facility, sanitary and hazardous waste landfill, incinerator and waste to energy facility. A single Solid Waste Treatment Plant Site (100 acres) for HPC has been selected near the northern boundary of zone 3.

Pharmaceutical industry in general is not a major air polluting industry. The manufacturing process may generate different kinds of gases, acidic to alkaline, in small quantities. The handling of raw



materials also can have some fugitive emissions. However, in each unit there will be arrangement to contain these emissions, draw the emissions into a scrubbing system. The scrubbing system can be of different types, from packed scrubber to direct spraying of water into the gaseous stream. The contaminated water dissolving the gases will be led to effluent treatment plant.

The other source of air pollution will be the boilers to produce steam, required as utility in the production process. The fuel will be coal. The emission from burning of the fuel will be discharged through 30 m high stack. Each boiler will have cyclone separator and bag filter as air pollution control system to control emission within 50mg/Nm³. There will be proper arrangement for Stack monitoring.

HPC project area is water deficient area with little rain fall. There is no perennial river or streams within or near the project area. Rain water harvesting is proposed in the project area to collect, convey and store rain water for use from roof, land surface, rock catchment, etc.

HPC authority will develop greenbelt on 15% of the total land. Individual units, during their development stage will develop green belt in 18% of their plot area. Green belt will be developed all along the periphery of the HPC site. Width of such green belt will vary between 15 m and 60 m depending on availability of space and need for such green belt.

Existing settlement have largely been excluded from the delineated boundary of the project. However, there are two settlements within the southern part of the site. These two settlements are proposed to be retained and integrated within the Pharma City. The GoTS has issued Orders for acquisition of Patta/Assigned Lands surrounding Government lands through negotiations. An R&R plan shall be prepared for all the displaced persons, both the homestead and the other areas at the project site as per State R&R policy.



4.0 BASELINE ENVIRONMENTAL SCENARIO

All areas falling within the project site peripheral as well as 10 km distance all along the periphery from the proposed project site boundary in Kandukur, Yacharam and Kadthal Mandals of Ranga Reddy District in the State of Telangana has been considered as study area.

The area falling within the radius of 10 km around the proposed project site boundary On-site environmental quality monitoring was carried out from 16th December, 2016 – 16th March, 2017.

4.1 Soil

Fifteen (15) sampling stations were selected for studying soil characteristics in the project site as well as in the study area.

Bulk density of soils samples varied between (1.35-1.45) gm/cm³ which is in normal range for such soils. Moisture content of the soils varied between (8.5-11.7)%. Grain Size analysis shows that sand, silt and clay in the soil samples were found in the range of (41.4-54.9)%, (15.6-27.9)% and (23.9-36.6)% respectively.

The soils were slightly acidic with pH range (6.5-6.9). Electrical conductivity (EC) was found varying between (496-701) μ mhos/cm. In soil samples, calcium content of the soils varied between (202-233) mg/kg. Range of sodium in the soils varied between (41-60) mg/kg. Range of potassium varied between (18-31) mg/kg. Nitrogen level varied between (155-195) mg/kg. The Phosphorous content ranged between (34.6-42.5) mg/kg. Cation Exchange Capacity (CEC) varied between (4.9-6) meq/100 gm. Ranges of Magnesium varied between (118-165) mg/kg. Organic Matter in the soils was observed between (1.7-2.3)%. Ranges of Boron, Manganese, Cadmium, Arsenic, Mercury were found to be <1 mg/kg. Ranges of Zinc (Zn), Chromium (Cr), Iron (Fe), Copper (Cu) & Lead (Pb) were found to be in the range of (9.3-13.3) mg/kg, (3.7-6.3) mg/kg, (13.7-16.3) mg/kg, (29.6-36.4) mg/kg and (2.2-5.9) mg/kg respectively.

4.2 Meteorology

The monthly maximum and minimum temperatures recorded on-site during the aforesaid monitoring period (16th December, 2016 - 15th March, 2017) varied between (30.4-37.9)^oC and (16.0-21.1)^oC

respectively with overall maximum and minimum temperatures being 37.9°C and 16.0°C respectively.

The monthly maximum and minimum relative humidity recorded on-site during the said monitoring period varied between (75-86)% and (25-30)% respectively, the overall maximum and minimum being 86% and 25% respectively.

The maximum wind speed 2.8 Km/hr was in the month of December, 2016 & March, 2017 while the overall mean wind speed during the whole monitoring period was 2.6 Km/hr. The most predominant wind direction was East-South-East.

4.3 Ambient Air Quality

Ambient air quality was monitored at fifteen (15) locations in the project site as well as in the study area.

The overall mean values of PM₁₀, PM_{2.5}, SO₂, NO₂, CO, O₃ and Hydrocarbon (Methane & Non-Methane) in the area (mean of all the 15 locations) were 65.9 µg/m³, 26.0 µg/m³, 5.2 µg/m³, 15.6 µg/m³, 0.389 mg/m³, 8.92 µg/m³, 0.417 ppm and 0.041 ppm respectively.

4.4 Water Quality

Water samples were collected and analyzed at seven (7) locations to assess the surface water quality and from eight (8) locations to assess the baseline status of the ground water quality in the project site as well as in the study area.

TummariCheruvu Reservoir water Quality

The pH value of the collected TummariCheruvu Reservoir water sample was found 9.4; value of Dissolved Oxygen was observed 8.1 mg/lit.; BOD was observed 2 mg/lit; Total Dissolved Solids and Total Hardness were found 331 mg/lit. and 147 mg/lit. respectively; Sulphate, Nitrate and Chloride were observed 11 mg/lit, 4.2 mg/lit and 69 mg/lit respectively; Calcium & Magnesium were found 18 mg/lit and 25 mg/lit respectively. Oil and grease was found below detectable limit (<2.0 mg/lit) in this sample. Values of Iron content was found 0.12 mg/lit and Zinc content was found below detectable limit (<0.05 mg/lit.) in this sample.

Pond Water Quality

The pH values of the collected pond water samples were found in the range of (8.3-9.6). Dissolved Oxygen was observed in the ranges of (5.4 – 8.6) mg/lit. Total Dissolved Solids were found in the ranges of (232-1154) mg/lit while Total Hardness was found in the ranges of (77-372) mg/lit. Calcium & Magnesium were found varying in the ranges of (18-38) mg/lit and (8-40) mg/lit respectively. Oil and grease was below detection limit (<2.0 mg/lit) in these samples. Sulphate, Nitrate and Chloride were observed varying in the ranges of (4-75) mg/lit, (1.5-7.4) mg/lit and (19 - 421) mg/lit respectively. Values of Iron and zinc contents were found in the ranges of (0.08-0.14) and (<0.05-0.07) mg/lit respectively.

Ground Water Quality

The pH values of collected ground water samples were found in the range of (6.8-7.2). Values of Total Dissolved Solids (TDS) were found in the ranges of (642-1452) mg/lit while Total Hardness were found in the ranges of (415-812) mg/lit. Calcium and Magnesium were found varying in the ranges of (79-156) mg/lit and (63-115) mg/lit respectively. Sulphate, Nitrate and Chloride were observed in the ranges of (21-90) mg/lit, (3.9–8.3) mg/lit and (183-470) mg/lit respectively. Iron contents were found in the ranges of (0.25-0.48) mg/lit and Zinc contents were found from below detection limit (<0.05 mg/lit.) to 0.10 mg/lit respectively. Alkalinity was found in the ranges of (324-759) mg/lit.

4.5 Noise

A total of 18 locations in the project site as well as in the study area were selected for the measurement of ambient noise levels.

During the day time, the equivalent noise levels were found to vary in the range of (45.6-64.1) dB(A) while in the night time, the equivalent noise levels were observed varying in the range of (39.3-48.0) dB(A).

4.6 Ecology

The project area is primarily considered as degraded upland with undulating terrain with sparse vegetation cover which is in some places surrounded by a number of degraded reserve forest (R.F).

The prime forest area belongs to dry deciduous forest type with sporadic semi dominant evergreen patches. The canopy cover of the forests is mostly 10-15%.

Other than forest area, there are a number of plantations and orchards around village settlement areas distributed in sporadic manner. The ground cover herbs & grasses are sparsely vegetated.

4.7 Demography and Socio-economy

The proposed Hyderabad Pharma City is situated in Kandukur, yacharam and kadthal Mandals of Ranga Reddy District in the State of Telangana. Total 232 villages fall under the study area including the project area. The study area is densely populated with the total population of 6,38,918 (as per 2011 Census). Majority of the area is rural in nature and moderately populated with the total population of 6,27,941 (as per 2011 Census). Scheduled Caste (SC) and Scheduled Tribe (ST) population is about 20.16% and 14.34% of the total population respectively. The sex ratio in the study area is about 942 females per 1000 males. The overall literacy rate is about 51.7%. In the major portion of the study area principal language is Telugu. The primary source of drinking water is Bore wells, which is distributed by pipeline network in most of the villages.

5.0 ENVIRONMENTAL IMPACTS OF PROPOSED PROJECT

5.1 Impacts on Air Quality

Pharmaceutical industry in general is not a major air polluting industry. The manufacturing process may generate different kinds of gases, acidic to alkaline, in small quantities. The handling of raw materials also can have some fugitive emissions. However, in each unit there will be arrangement to contain these emissions, draw the emissions into a scrubbing system. The scrubbing system can be of different types, from packed scrubber to direct spraying of water into the gaseous stream. The contaminated water dissolving the gases will be led to effluent treatment plant.

The other source of air pollution will be the boilers to produce steam, required as utility in the production process. The fuel will be coal. The emission from burning of the fuel will be discharged through 30 m

high stack. Each boiler will have cyclone separator and bag filter as air pollution control system to control PM emission within 50 mg/Nm³. Based on the expected no. of units, to be located in the project area, total 230 boilers, each of 10 TPH capacity have been considered for the impact prediction to project the worst case scenario. Besides particulate matter, the major pollutants will be SO₂ & NO_x. Other pollutants will be negligible.

250 MW Gas fuelled engine coupled cogeneration (power & cooling) plant will be another source of air pollution. Modular and scalable Gas based co-generation plant, with 25 units, each of 10 MW capacity is proposed. Total 25 stacks have been considered, each attached to the individual 10 MW units. NO_x will be the only pollutant of concern.

Apart from this, a 3 MW waste to energy plant has also been proposed for the dual benefit of reduction of municipal solid waste to be sent to landfill and production of useful electrical energy, which will also be another source of pollution. A single stack of 30 m. height has been considered.

As recommended by CPCB, GLCs at various receptor locations within the study area have been computed for the three months' period (16th December, 2016 - 15th March, 2017) representing the winter season, based on the hourly meteorological data of this period. The computation has been made applying Industrial Source Complex (ISC3) model, developed by United States Environmental Protection Agency (USEPA), which is most widely used and also recommended by CPCB (PROBES/70/1997-98).

The maximum incremental values of SO₂, NO_x & PM would be about 54.01 µg/m³, 57.87 µg/m³ & 14.47 µg/m³ respectively, which will occur at a distance of 2 km. in WSW direction from the ARP.

The predicted maximum GLCs of SO₂, NO_x & PM due to the operation of the proposed project is within the prescribed limits. Therefore, there will be insignificant impact on the Air Quality of the area due to the operation of the project.

5.2 Impacts on Water Quality

The "zero wastewater discharge concept" shall be adopted and the entire wastewater will be recycled for various uses inside the project

area. As no wastewater will be discharged into any outside water body, there will be no impact on the water quality of any surface water bodies of the area.

5.3 Impacts on Soil

Mainly, two types of solid wastes will be generated within HPC. These are domestic solid waste generated within the zone 1 and industrial solid waste generated by the industries in other zones. Some amount of domestic solid waste will be generated by workers of the industries. The industrial solid waste will contain hazardous wastes. It is essential that, all types of solid wastes are treated and disposed safely as the prescribed norms of Central Pollution Control Board and Telangana State Pollution Control Board. This will ensure that there will not be any impact on soil quality due to the disposal or deposition of solid waste.

5.4 Impacts on Land Use

The proposed Pharma City site is a green field site with some agricultural pockets, scrub land and scattered rocky areas. As a first step of this development this piece of land would be dressed, made free of existing vegetation, leveled as per need for accommodating the proposed developments.

Due to undulating nature of the site, the cut and fill will be optimized to 100% and potentially be a zero disposal system. Smaller rocks will be converted into construction materials at sites, which can be used locally as stone walls, building finish and laying of roads and earthworks to create sustainable developments.

5.5 Impacts on Biological Environment

The surrounding area has substantial vegetation in the form of village orchards, roadside trees and agriculture.

There is no eco-sensitive area like National Park / Wildlife Sanctuary / Tiger Reserve / Elephant Reserve / Core Zone of Biosphere Reserve / Habitat for Migratory birds etc. within the study area around the Project site. However, few Reserve Forests are situated around the project site.

If the gaseous emission is controlled properly, there will not be significant impact. There will be sufficient plantation of trees at the



project area. All these measures, if implemented properly will ensure insignificant impact on the local vegetation from the proposed project and may improve the vegetation scenario of the area.

All mature trees at site will be preserved, or mandatory transplantation of the same on site will be made, if required.

No wastewater will be discharged outside the plant premises. There is, therefore, no impact on the aquatic ecology of the water bodies.

5.6 Impacts on Socio-Economic Environment

The project will offer substantial employment potential during construction phase and operation phase, which will have beneficial impact.

6.0 ENVIRONMENTAL MANAGEMENT PLAN

M/s Telangana State Industrial Infrastructure Corporation Limited will develop various management activities for the Environmental Management Programme which will meet all statutory requirements and help to improve environmental quality.

In order to improve the aesthetic look of the area and enhance the land use as well as to compensate for any loss in ecology during construction, adequate plantation programmes around the project site have been planned and will be adopted. Development of green belt will include plantation of trees along the periphery of the project area, roads and other available spaces. 33% of total project area will be covered under green cover.

A detailed monitoring for different environmental parameters will be carried out as per direction of State Pollution Control Board. An environmental management group will be established to implement the management plan.

About 2.5% of the project cost shall be used for environmental management





Table-1 List of village wise survey nos. in Hyderabad Pharma City

Sl. No.	Revenue Village	Gram Panchayat	Mandal	Survey No.
1.	Mucherla	Mucherla, Saireddy guda	Kandukur	288, 155, 306, 186, 123, 123 (Bhoodan), 140, 156 & 157
2.	Meerkhanpet	Meerkhanpet	Kandukur	112, 120, 113 to 119
3.	Panjaguda	Akula mylaram	Kandukur	90, 91
4.	Kurmidda	Kurmidda	Yacharam	32 to 36, 40 to 79, 81 to 91, 93 to 106, 108 to 140, 165, 166, 107, 36, 37, 39, 77, 80, 99, 301 to 308, 310 to 313, 322, 326, 333, 168 to 175, 269 to 291, 294 to 300, 264, 292, 92, 293,
5.	Medipally	Medipally	Yacharam	85, 97, 98, 102, 103, 124, 125, 126, 128, 129, 130, 132, 133, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 146, 147, 148, 149, 150, 151, 157, 158, 164, 165, 166, 167, 168, 171, 172, 173, 174, 175, 176, 177, 178, 179, 181, 182, 183, 186, 187, 188, 189, 190, 191, 196, 197, 199, 201, 202, 203, 204, 206, 207, 208, 210, 211, 212, 214, 215, 216, 217, 218, 219, 220, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 238, 239, 240, 241, 242, 243, 244, 245, 246, 248, 250, 251, 252, 254, 256, 257, 258, 261, 263, 268, 272, 273, 274, 275, 276, 277, 278, 281, 282, 283, 285, 286, 287, 291, 292, 293, 298, 332, 408, 428, 429, 438, 101, 127, 131, 134, 145, 184, 185, 205, 209, 213, 237, 247, 249, 426, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 86, 87, 88, 90, 91, 92, 93, 94, 95, 105, 116, 119, 120, 288, 297, 310, 96, 106, 107, 108, 113, 114, 115, 117, 152, 153, 154, 155, 156, 159, 160, 161, 162, 163 89, 118, 99, 100, 109, 111, 112, 122, 123, 169, 170, 180, 192, 193, 194, 198, 200, 262, 279, 280, 284, 253



Sl. No.	Revenue Village	Gram Panchayat	Mandal	Survey No.
6.	Nanaknagar	Nanaknagar	Yacharam	31,32,33,34,35,36,37,38,39,40,41,42,44,45,46,47,49,50,51,52,53,54,56,57,58,59,60,61,62,63,64,65,66,67,68,69,70,71,72,73,74,75,76,77,78,79,80,81,82,83,85,43,48,55,84,86,13,14,15,16,17,18,19,21,22,23,24,25,26,27,28,29,30,87,88,89,91,92,93,94,95,96,97,98,99,100,101,102,104,105,106,137/1,137/2,138,139,141,142,143,144,145,146,20,84,86,90,103,140,172,173
7	Thadiparthu	Thadiparthu	Yacharam	97, 98, 100, 101, 102, 103, 104, 105, 106, 107, 108, 110, 111, 112, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 170, 171, 172, 173, 174, 176, 155, 175, 177, 1, 2/1, 2/2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 13, 14, 15, 16, 17, 18, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41/1, 41/2, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 81, 82, 83, 84, 86, 87, 89/1, 89/2, 90, 91, 92, 93, 94, 95, 96, 99, 162, 163, 164, 165, 166, 167, 168, 169, 178, 179, 180, 181, 182, 183, 184, 185, 186, 188, 189, 190, 191, 192, 193, 194, 195, 196, 12, 19, 66, 80, 85, 177, 187
8	Mudvin	Mudvin	Kadthal	172, 173, 174, 175, 176, 177, 178, 180, 181, 182, 183, 184, 185, 186, 187, 188, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 265, 266, 269, 270, 179/1, 189, 215, 222
9	KarkalPahad	KarkalPahad	Kadthal	32, 33, 34, 50, 51, 52, 53, 55, 56, 57, 58, 61, 62, 63, 64, 65, 66, 67, 68, 98, 99, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113,



Sl. No.	Revenue Village	Gram Panchayat	Mandal	Survey No.
				114, 115, 117, 52/1, 69
10	Kadthal	Kadthal	Kadthal	217, 218, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 232, 233, 234, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 252, 253, 254, 255, 256, 257, 260, 267, 268, 269, 270, 272, 273, 275, 276, 277, 278, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 296, 297, 298, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 372, 373, 374, 379, 380, 381, 382, 383, 385, 386, 387, 388, 389, 390, 391, 392, 394, 395, 396, 397, 398, 231, 265, 266, 321/2, 260/2

Table-2 Land acquisition

Landownership and land Acquisition status for Hyderabad pharma city is given below

Category	Area in Acres	% of total Area	Ownership	Remarks
Private Land – yet to be acquired	9806.05	50.73	Private	Acquisition under Process
Private Land – acquired	400.75	2.07	TSIIC	Land acquired and in TSIIC's possession
Government Land – yet to be alienated	2704.90	13.99	Government	Govt. lands to be transferred to TSIIC and Assigned lands to be acquired
Government Land – in TSIIC possession	6209.50	32.12	TSIIC	Govt. lands alienated/ transferred to TSIIC
Transco Land	100.00	0.52	Government	Land acquired by TSTRANSCO for development of 400/220 kV Substation
Area of Water Bodies	110.00	0.57	Government	Not to be acquired
Total Area (in acres)	19333.20	100.00		