Pre Feasibility Report
on
Establishment of Bulk Drugs and Intermediates

at

Plot No.172 & 173
KIADB Industrial Area,
Kadechur, Yadgir Dist-585221
Karnataka

By

Prasanna Biomolecules Pvt.Ltd

Registered Office

Plot No.137, Prashanth Nagar IE ,Kukatpally
Hyderabad-500072
Telangana

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1. EXECUTIVE SUMMARY

1.1 Brief summery on the details of the project proponent

Prasanna Bio Molecules Pvt Ltd is incorporated by Sri Purnchandra Rao Kavuri, having an experience of more than 10 years in bulk drug industry and Sri Jampani Venkateshwara Rao,having an experience of 12 years in related field in 2017.

1.2 location of the project

The proposed industry is coming up on plot No 172 & 173, KIADB Industrial Area, Kadechur Village in Yadgir Dist of Karnataka state.

1.3 Brief history of the project

The proposed industry is establishing afresh and as per the schedule of EIA notification 2006 industry falls under category5(f).Industrial area has obtained environmental clearance in 2015.Proposed industry attracts general condition as the industrial area is within the interstate boundary.

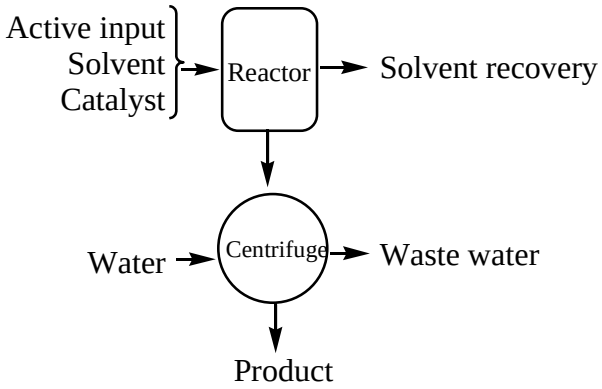
1.4 Size and magnitude of the operation

Industry proposes to manufacture bulk drugs and intermediates 99 TPM on small scale in an area of 8094 SQM.

1.5 Process Description

Active raw materials of the respective products are charged into reactor filled with a corresponding solvent as per the process batch sheet. After maintenance reaction completion is checked and once reaction is complete, solvent is recovered by distillation for next batch. The product is isolated by precipitation or crystallisation by seeding process. Finally it is purified with water wash and sometimes with a suitable solvent

Flow Chart



1.6 Raw material requirement

Majority of the raw material required by the industry procured locally. Some of the raw materials will imported considering the availability locally and economics

1.7 Water

Industry requires 78.40 KLD

1.8 Power:

Industry's power requirement is 300KVA and proposes to install 225KVA DG set as standby.

1.9 Environmental sensitivity of the project location

Sl.No	Description	Details
1	Nearest Habitation	Kadechur Village-1.8 KM
2	Nearest Town	Yadgir-48 Km
3	Nearest Highway	NH-150 Between Yadgir and Raichur-0.8KM
4	Interstate Boundary	Chegunta:3.7 Km
5	Nearest Railway station	Saidapur-9 Km Chegunta:3.7 Km
6	Nearest Air Port	Bellary:121 Km & Rajiv Gandhi International Airport: 140 Km

2. INTRODUCTION OF THE PROJECT

2.1 Identification of the project and project proponent

Prasanna Bio Molecules Pvt. Ltd is a bulk drugs and Intermediates manufacturing industry. It is located on Plot No 172 & 173,KIADB notified Industrial Area, near Kadechur Village in Yadgir Dist. It is incorporated in 2017 under industries Act by Sri Purnachadra Rao Kavuri and Sri Jampani Venkateshwara Rao. Both are experienced in the related field. Industry has acquired 8094 SQM of land from KIADB, a Govt. of Karnataka wing.

2.2 Demand-Supply Gap

India's domestic pharmaceutical market is estimated at US$ 42 billion in 2021 and likely to reach US$ 65 billion by 2024 and further expand to reach ~US$ 120-130 billion by 2030. ... The Indian biotechnology industry was valued at US$ 64 billion in 2019 and is expected to reach US$ 150 billion by 2025.

India is the largest provider of generic drugs globally. Indian pharmaceutical sector supplies over 50% of global demand for various vaccines, 40% of generic demand in the US and 25% of all medicine in the UK. Globally, India ranks 3rd in terms of pharmaceutical production by volume and 14th by value. The domestic pharmaceutical industry includes a network of 3,000 drug companies and ~10,500 manufacturing units

Source: Secondary

2.3 Imports vs. Indigenous production

To achieve self-reliance and minimise import dependency in the country's essential bulk drugs, the Department of Pharmaceuticals initiated a PLI scheme to promote domestic manufacturing by setting up Greenfield plants with minimum domestic value addition in four separate ‘Target Segments’ with a cumulative outlay of Rs. 6,940 crore (US$ 951.27 million) from FY21 to FY30. In June 2021, Finance Minister Ms. Nirmala Sitharaman announced an additional outlay of Rs. 197,000 crore (US $26,578.3 million) that will be utilised over five years for the pharmaceutical PLI scheme in 13 key sectors such as active pharmaceutical ingredients, drug intermediaries and key starting materials.Further low cost of production and increased efficiency in R & D activities has considerably reduced the dependency on imports.

2.4 Export possibility

India’s drugs and pharmaceuticals exports stood at US$ 24.44 billion in FY21. India is the 12th largest exporter of medical goods in the world. The country’s pharmaceutical sector contributes 6.6% to the total merchandise exports. As of May 2021, India supplied a total of 586.4 lakh COVID-19 vaccines, comprising grants (81.3 lakh), commercial exports (339.7 lakh) and exports under the COVAX platform (165.5 lakh), to 71 countries. Indian drugs are exported to more than 200 countries in the world, with US being the key market. Generic drugs account for 20% of the global export in terms of

volume, making the country the largest provider of generic medicines globally. India's drugs and pharmaceuticals exports stood at US$ 3.76 billion between April 2021 and May 2021**.**

Source: Secondary

2.5 Domestic/ export markets

According to the Indian Economic Survey 2021, the domestic market is expected to grow 3x in the next decade. India's domestic pharmaceutical market is estimated at US$ 42 billion in 2021 and likely to reach US$ 65 billion by 2024 and further expand to reach ~US$ 120-130 billion by 2030.

India's medical devices market stood at US$ 10.36 billion in FY20. The market is expected to increase at a CAGR of 37% from 2020 to 2025 to reach US$ 50 billion

Source: Secondary

2.6 Employment Generation

Direct Employment generation from the industry is about 163 .It is estimated that indirect employment is about 24. Below table depicts the proposed employment

Table 2.1 Details of employment

Key managerial staff	5	Plant manager & Production Activities
Administration	3	To take care of Liaison Activates
Skilled	75	Shift Chemist, supervisors, Laboratory activities etc.,
Un- Skilled	80	Regular plant operations
Total	163	

3. PROJECT DESCRIPTION

3.1 Type of project including interlinked and interdependent projects

The proposed project is an independent bulk drugs and intermediates manufacturing industry, It is not linked with any other activity.

3.2 Location with coordinates

Industry lies between the below given Latlongs.

16°31'37.20"N	77°18'31.68"E
16°31'37.20"N	77°18'34.92"E
16°31'35.04"N	77°18'34.92"E
16°31'35.04"N	77°18'31.68"E

Fig.1 **General Location**

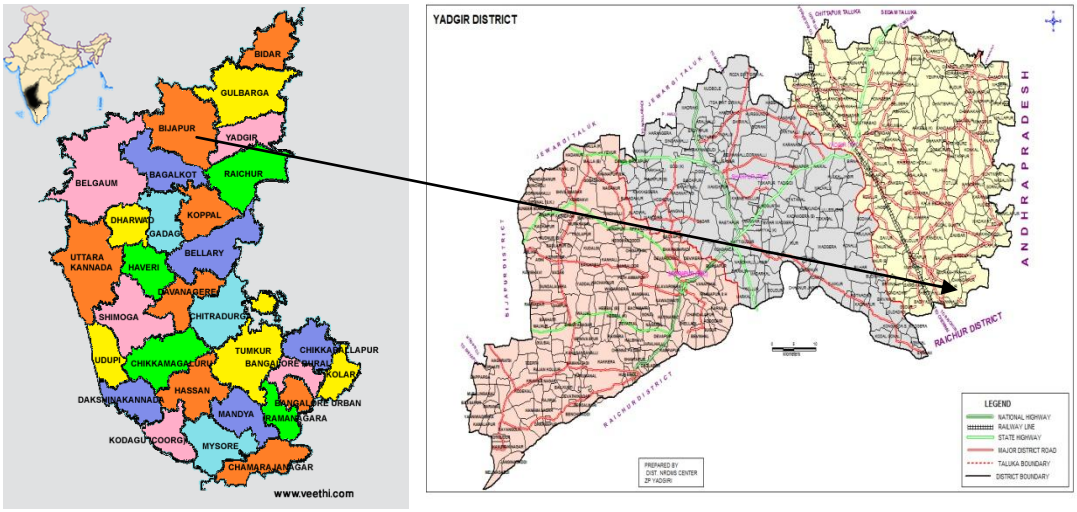
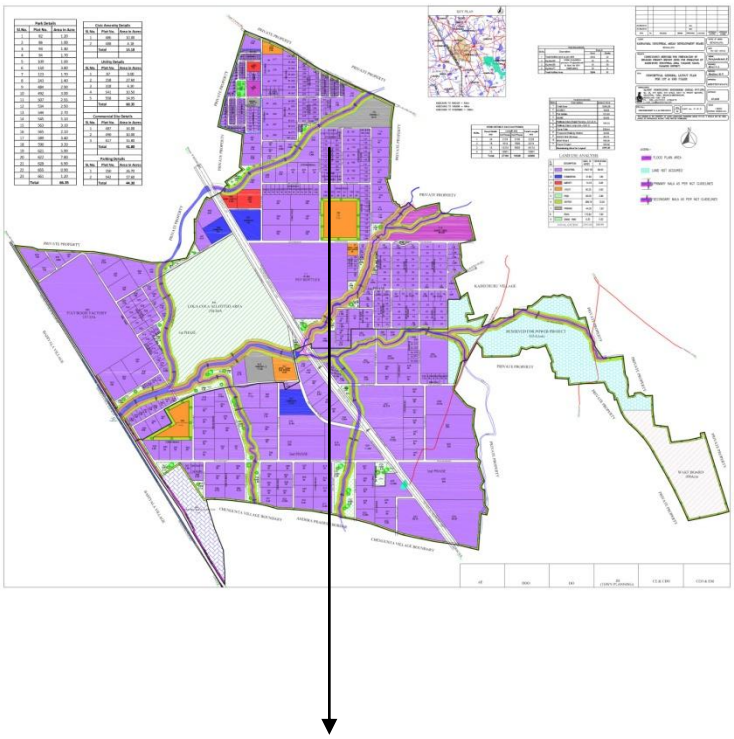


Fig.2 Industrial Site Layout



Proposed Industry

3.3 Details of alternative sites and the basis of selecting the proposed site particularly the environmental considerations gone

No alternative sites considered since the industry is proposed to be established in a notified industrial area for which environmental clearance is taken

3.4 Size or magnitude of operation

Company is a small scale industry and total production is not more than 93 TPM

3.5 Project description with process details with flow Charts

3.5.1 List of proposed Products and by Products

Table 3.1: List of products

Intermediates

Sl. No	Name of the product	Production in TPM
1.	2- Chloro aceto nitrile	5.00
2.	N,N Carbonyl di imidazole	5.00
3.	N,N-Disuccinimidyl carbonate	5.00
4.	2-Piperidin-4-Yl-Benzoimidazole	2.00
5.	2-Ethoxyl-4-Methyl Benzene Sulfonate	5.00
6.	N-Cyanophenyl Glycine	4.00
7.	3-Aminodamantine-1-ol	2.00
8.	Bis(4-Nitrophenyl)Carbonate	3.00
9.	4-Nitrophenyl chloroformate	4.00
10.	Isobutyramide	4.00
11.	4-Chloromethyl-5-Methyl-1,3-Dioxol-2-one	5.00
12.	2-Propyl-1H-Imidazole4,5-Dicarboxylic Acid	5.00
13.	2-Phenylethylsiocyanate	2.00
14.	Ethyl 3-(Pyridin-2-yl Amino)Propanoate	3.00
15.	(S)-1-(2-Chloroacetyl)pyrrolidine-2-Carbonitrile	5.00
16.	Valeronitrile	4.00
17.	N,N-Diethyl,2-Cyanoacetamide	3.00
18.	N-Hydroxysuccinamide	4.00
19.	4-Hydrazino-Benzoic Acid	5.00
20.	Cytosin	3.00

Bulk Drugs

Sl. No	Name of the product	Production in TPM
21.	Bilastin	3.00
22.	Deferasirox	4.00
23.	Gabapentin	5.00
24.	Prasugrel	3.00
25.	Vildagliptin	3.00
26.	Pioglitazone hydrochloride	3.00

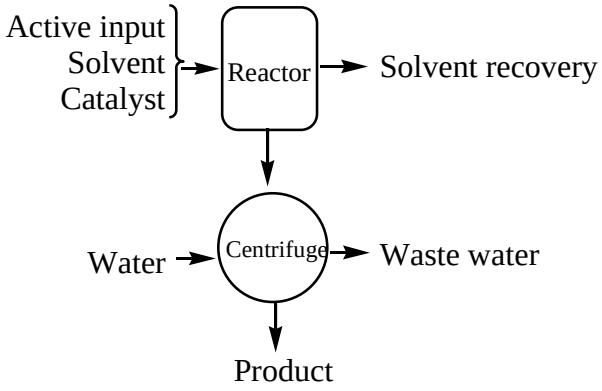
By-Products

Sl. No	Name of the product	Production in TPM
	Tributylamine HCl	3.80
	Sodium bromide	0.50
	Potassium Chloride	1.85
	Acetic Acid	0.98
	Methane Sulfonyl Potassium	0.30
	Ammonium Chloride	1.80
	Dimethyl Aniline	1.40
	Ammonium Acetate	1.10
	Sodium Bromide	2.60
	Triphenylphospine Oxide	1.20
	3-Ethoxy Acetonitrile	2.70
	Sodium P-Toluene sulfonate	1.20
	Potassium P-Toluene sulfonate	0.75
	2-Amino-2- Methyl Propan-1ol	0.48

3.5.2 Manufacturing process

Active raw materials of the respective products are charged into reactor using a solvent as per the process batch sheet. After maintenance solvent is recovered by distillation for next batch. Thus product is isolated and purified with water wash and sometimes with crystallisation with a suitable solvent.

Flow Chart



3.6 Raw Materials

Raw Material required y the industry are procured locally. Any raw material that is not available in th e country will be imported. Raw material are transported to the company by road, rail and by Air. Majority of the bulk drugs will be exported and intermediates will be sold to local manufacturers. By products will be consumed by the industry. Details of raw materials with quantity will be provided in EIA report

3.7 Resourcing optimization/ recycling and refuse envisaged in the project

Raw material required by a product will be used as per the batch process record. No excess quantities will be used. No re-cycling or re-use of finished product is envisaged. Products obtained from scrubbers will be utilized within the industry. Excess material will be disposed to appropriate buyers.

3.8 Availability of water source, Energy/ power requirement and source

- **Water source:**

To manufacture the products industry requires 78.40 KLD of water and it is supplied by KIADB.

Table 3.2: Water requirement

Purpose	Requirement
Process	20.90
Washing	5.00
Boiler Feed	20.00
Cooling Tower Feed	20.00
Scrubber	4.00
DM Plant	2.00
Domestic	3.50
Greenbelt	3.00
Total	78.40

- **Power**

To produce the proposed products industry requires about 300KVA.It will be obtained from GESCOM. Industry proposes to install 225 KVA DG set as a standby.

- **Fuel**

For the proposed 3TPH coal fired boiler industry requires about 6.5 MT of coal per day. About 40 Ltr/hour Diesel oil is required for DG set when operated.

3.9 Quantity of wastes should be generated

- **Effluent**

From the manufacturing activity industry generates 43.60 KLD. Details are given in below table. Entire waste water generated by the industry will be sent to CETP established in the industrial area after subjecting it to primary treatment within the industry.

Table 3.3: Waste water generation

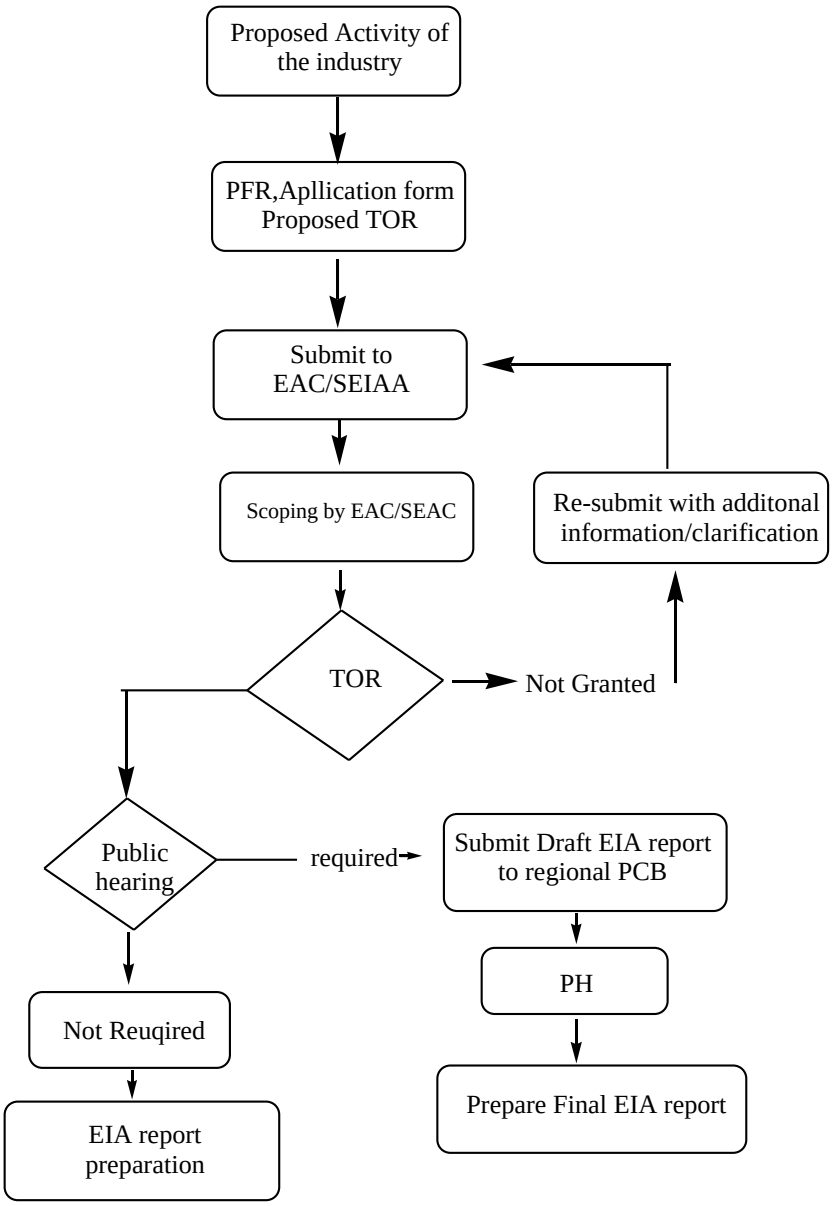
Purpose	Requirement
Process	24.60
Washing	5.00
Boiler Feed	3.00
Cooling Tower Feed	4.00
Scrubber	4.00
DM Plant	1.00
Domestic	2.00
Greenbelt	00
Total	43.60

- **Hazardous Wastes**

Table 3.4: Hazardous waste details

Sl.No	**Description**	**CPCB Schedule -1**	**Qnty Kg/day**
1	Inorganic Salts	28.1	379.1
2	Organic Wastes	20.3	230.0
3	Spent Carbon	28.2	214.0
4	Spent organic solvents	28.5	170.0
5	Containers(Units)Discarded Barrels)	33.3	10.0
6	Polythene bags	33.3	100.0
7	Used oil(Ltr)	5.1	2.00

Fig 3 Schematic representations of the feasibility drawing



4. Site Analysis

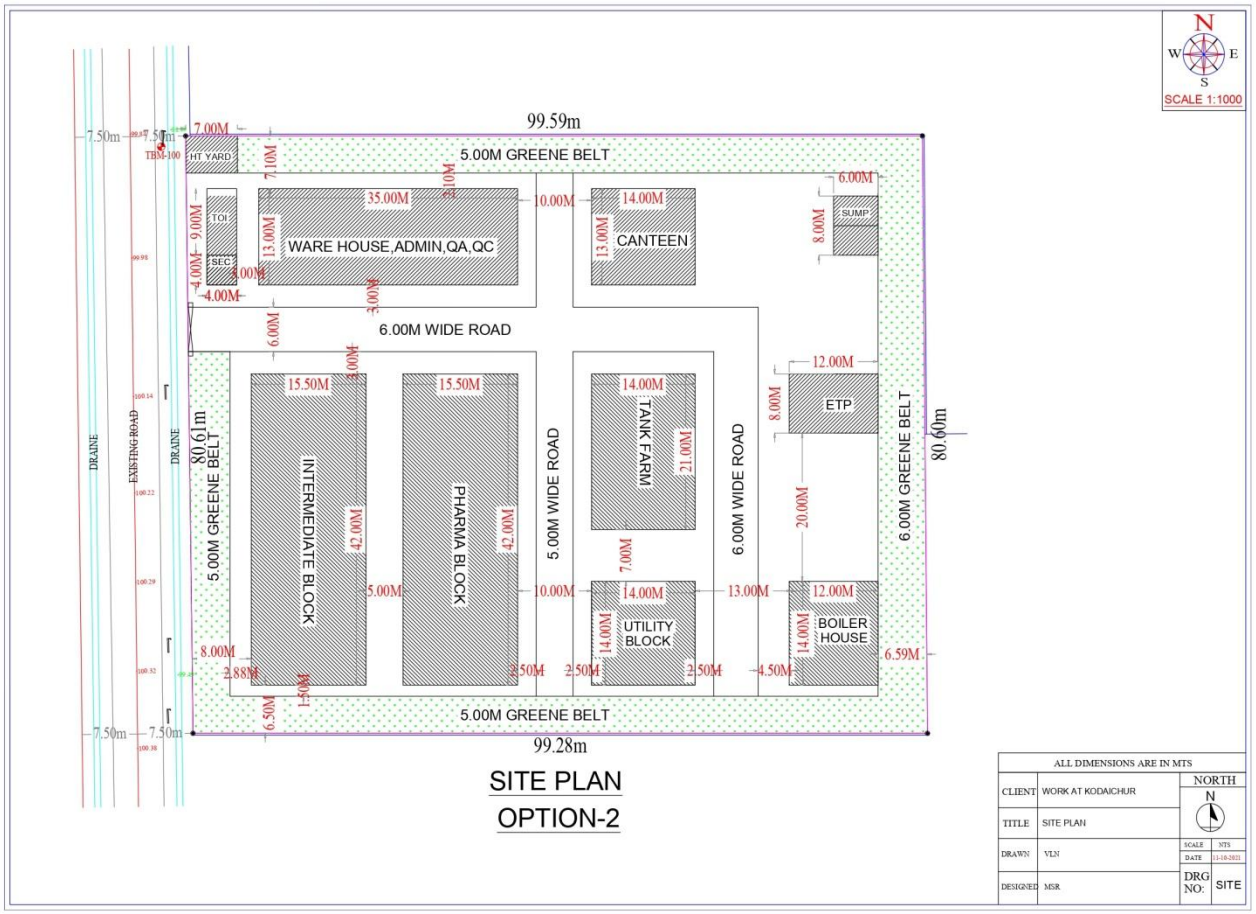
4.1 Connectivity

The area is well connected by road, rail and Air. It is 48 km to Yadgir town. Saidapur railway station is at distance of 9 Km and Chegunta at a distance of 3.7 KM. Nearest air port is Kalaburagi and it is at a distance of 126 KM

4.2 Land Form, Land use and Land ownership.

Entire industrial area is plain and there are mountains or hills in the near vicinity. Total area developed for industries of various activities. iIt is about 3329 Acres and owned KIADB of Karnataka Govt.2 Acres is allotted to proposed industry by the Govt. of Karnataka.

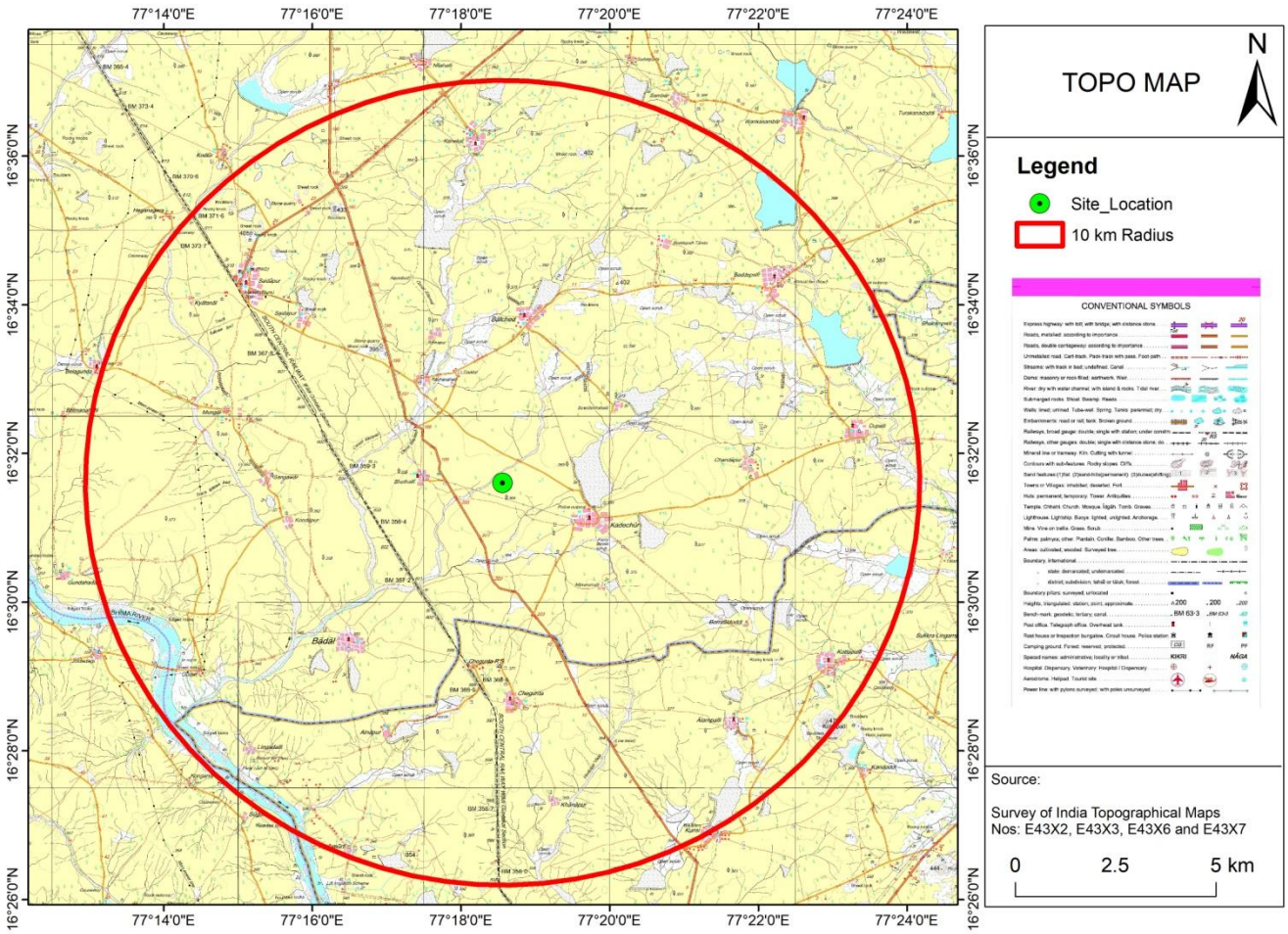
Fig 5: Site Plan of the proposed industry



4.3 Topography

The area lays between $16^0$31’3.04” to $16^0$31’37.20” North Latitude and $77^0$18’31.68” to $77^0$18’34.92” East Longitude. The industrial area covered with pediment/ pediplain complex and there is no any structural/ denudational hill. Industrial area lies between two rivers namely Krishna and Bheema at adistance of 12 KM.

Fig.6: Topographical Map



4.4 Existing land use pattern

The industrial area is notified by the Govt of Karnataka and Environmental Clearance is taken

4.5 Existing Infrastructure

The industrial area is well developed. Infrastructure required for the establishment of industries is provided.

4.6 Soil classification

The soil types in the district are deep black, medium black soil, shallow soil and lateritic soil. The deep & medium black soil covers practically the entire district's area, except a small portion towards the northern part of the district. Black soil has been derived from basaltic rocks and varies in colour from medium to deep black. Lateritic soil occurs in small extent towards the northern part of the district

Source: CGWB

4.7 Climatic data from secondary sources

- **Temperature**

The average day temperature during summer varies between 37^0C to 40^0C in daytime and nights varies between 26^0C to 31^0C.In monsoon it varies between 300C to 31^0C in day time in night it varies between23^0C and 24^0C. In winter temperature varies between 30^0C and 31^0C during day time in the nights it varies between 19^0C and 22^0C.

- **Rain Falls**

The average rainfall of the area is 257 mm

4.8 Social Infrastructure available

The social infrastructure like educational institutions, hospitals both Govt. and private are available.

5. PLANNING BRIEF

5.1 Planning concept

The proposed production of bulk drugs & Intermediates per month is 96 MT and accordingly the machinery requirement is worked out. The most of the industries coming up in the industrial area are bulk drug manufacturing units. Industry proposes to provide canteen and transpiration facility. Unskilled workers will be trained. No housing facility for the workers is planned.

5.2 Population Projection

Yadgir district has total population of 1174271as per the Census 2011. Out of which 590329 are males while 583,942 are females. Total workers are 547,696 out of which men are 317,135 and women are 230,561. Activity of the industry will contribute to increase in population from outside area into the nearby villages

5.3 Land use planning

As per the Fig.5 under point No.4.2 above

5.4 Assessment of infrastructure Demand

The road facility is available which will be used. The labour requirement will be drawn from the nearby Kadechur, Badiyal,Saidapur villages., They will be trained to engage in the proposed activity. Housing complex is not required as the staff and the labours will stay at the nearby villages

5.4 Amenities / Facilities.

Facilities for road transport need to be provided. Communication facilities with Mobile telephone service are available in the area. Other amenities like canteen, dispensary, drinking water facility, toilets, First Aid Room need to be provided for workers and staff.

6. PROPOSED INFRASTRUCTURE

6.1 Industrial Area

Production activity will be carried out in an area of 2590 out of 8094 SQM of total land

6.2 Residential Area

No residential area is earmarked

6.3 Green Belt.

Green belt will be maintained in area of 2671 SQM. Green belt not only improves the aesthetics of the surrounding but is mandatory. With selected perennial plant species that are helpful in mitigating the noise environment, Air environment, industry will plant by taking support from external agencies.

1.4 Social Infrastructure

The industry will provide direct and indirect employment to about 78 people who include supervisors, skilled, semi skilled and unskilled labor and indirect employment in contractual works and transport. The industry will provide drinking water, health care facilities, conduct educational programs, promotion of cultural & religious activities, training in self-employment schemes to the neighboring villagers in addition to their own employees. Preference will be given to local people for employment.

1.5 Connectivity

Described above

1.6 Drinking Water Management

Drinking water will be managed by arrangement through KIADB water supply and installing RO system

6.7 Industrial Waste Management

Described above

6.8 Solid Waste Management

Described above

6.9 Power Requirement and Supply/ source

Industry requires 300 KVA power and it will be obtained through dedicated power connection provided by GESCOM to the industrial area.

7. REHABILITATION AND RESETTLEMENT (R&R) PLAN

7.1 Policy to be adopted

Reclamation and Rehabilitation works are already completed by KIADB, a wing in the Government of Karnataka.

8. PROJECT SCHEDULE & COST ESTIMATES

8.1 Likely date and start of construction and likely date of completion

Industry proposes to start the activity as soon as environment clearance and consent from state pollution control board is accorded. It is envisaged that activity will be commenced from February 2022.

9. ESTIMATED PROJECT COST ALONG WITH ANALYSIS IN TERMS OF ECONOMIC VIABILITY OF THE PROJECT

A. Civil Works

Sl.No	Particulars	Expenditure	₹ Cr
1	Foundation	Excavation Filling Transportation Road Infrastructure Overhead expenses Head office expenses	0.070 0.030 0.020 6.200 0.050 0.010
			6.400
2	Plant & Machinery	Reactors, Storage tanks etc.,	8.200

B. Environmental Cost

Sl. No.	Particulars	Capital cost proposed ₹ Cr	Annual recurring cost. ₹ Cr
1.	Pollution Control	0.100	0.010
2.	Pollution Monitoring	0.000	0.005
3.	Occupational Health	0.010	0.005
4.	Green Belt	0.100	0.005
5.	Others	0.000	0.002
6.		0.210	0.027

B. Socio Economics

Sl. No	Particulars	Expenditure ₹ Cr
1	Education	
	i. School books, uniforms to school children	0.010
	ii. Repairs & maintenance of school buildings	0.050
2	Health camps	0.050
3	Water supply & sanitation in villages	0.030
5	Plantation in villages	0.050
6	Cultural activates	0.020
	Sub Total	0.210

Total invest cost of the project is ₹14.60 Cr

10. ANALYSIS OF PROPOSAL
(Final Recommendations)

Total production activities proposed is 99 TPM. Calculating the revenues @10% yield 9.90 cr. After deducting salaries, Socio economic expenditure and Applicable Govt. of Karnataka Taxes, net revenue to the industry is about 6.72 Cr

10.1 Financial and social benefits with special emphasis on the benefit to the local people including tribal population

With establishment of the industry, local people will improve their living standards**.**