APPLICATION FOR ENVIRONMENTAL CLEARANCE

PRE-FEASIBILITY REPORT

FOR

"PROPOSED DEVELOPMENT OF HORAHALLI INDUSTRIAL AREA - 4th PHASE – Land Area 142.59 Ha [352.36 Acres]"

Located at

VILLAGES: Cheeluru and Rampura

TALUK: Kanakapura

DISTRICT: Ramanagara

STATE: Karnataka

BY

M/s. Karnataka Industrial Area Development Board

Project Terms under 7(c) Category 'A' as per EIA Notification 2006 and its amendments (Due to attracting GC conditions and violation SOPs)

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Report Prepared by

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August 2022

NABET Accredited vide Certificate No. NABET/EIA/1922/RA0172 valid till 13/10/2022

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EXECUTIVE SUMMARY

M/s. Karnataka Industrial Areas Development Board is an undertaking of Government of Karnataka entrusted with the objective of providing industrial infrastructure through development of industrial areas proposed to develop Horahalli Industrial Area -4th Phase in an area of 142.59 Ha (352.36 Acres) at Cheeluru and Rampura Villages, Kanakapura Taluk, Ramanagara District, Karnataka State.

As per the EIA Notification 14th September 2006 and its subsequent amendments proposed project is termed under Schedule 7(c) – Industrial Estates /Parks /SEZ etc, Category A, as the project location is at a distance of Bannerghatta National Park ESZ is ~8.66 Km (SE) and KIADB is proposing to establish Red Category industries with in the industrial area.

Since, the applicability of General Condition of MoEFCC notification, the project appraisal will be done at Expert Appraisal Committee (EAC), MoEF&CC as treated as category A project.

As per the 302nd Minutes of Meeting published by EAC,MoEFCC, New Delhi, and the suggestions of Hon'ble Chairman and Committee Members, revised project documents are resubmitting under violation category as few developmental works were undertaken within the proposed industrial area.

Total water requirement – 2039KLD. Effluent generated –780KLD. Sewage generated - 749 KLD. Sewage will be treated in proposed CSTP of 900 KLD and treated sewage will be recycled for green belt development and flushing for residential units.

Trade Effluent will be treated in Proposed 1000 KLD CETP, followed by RO and ATFD. Treated effluent will be recycled for utilities and process.

Required quantity of water is 2 MLD will supplied by BWSSB and already allocated Potable water of 13.50 MLD capacity, Vide Order No. BWSSB CE(R) TA-10 D-198/2012-13, which is sufficient to meet Fresh Water demand (1 MLD) for Harohalli 4th Phase Industrial Area and also Remaining quantity water (1 MLD) will be met from the proposed 30MLD TTP at Bidadi Industrial Area and is enclosed as **Annexure- 3**.

The power requirement for the project will be sourced from BESCOM. Total power requirement is estimated to be 5 MVA.

Sufficient area will be allotted for greenbelt development, which shall include the buffer zone and green belt developed by individual industries to meet MoEF&CC guidelines. All

applicable guidelines as per the state and/or central regulatory bodies shall be considered in the development of proposed project.

The total estimated cost for the proposed project is 361.28 Crores .The EMP cost and CER cost are in addition to the estimated Project cost. The Corporate Environment Responsibility (CER) budget would be allotted as per the guidelines prescribed in the latest OM from MoEFCC dated 30.09.2020.

1. INTRODUCTIONOF THE PROJECT

1.1 Identification of the Project and Project Proponent

KIADB is a wholly owned infrastructure agency of government of Karnataka, set up underKarnataka Industrial Areas Development Act of 1966. KIADB holds pride in being the first Government organization in Karnataka to obtain ISO 9001 certification in the year 1997.

Aim and Objectives of the KIADB

- Promote rapid and orderly development of industries in the state.
- Assist in implementation of policies of government within the purview of KIADB Act.
- Facilitate in establishing infrastructure projects.
- Function on “No Profit – No Loss” basis.

Functions of the KIADB

- Acquire land and establish industrial areas in the state.
- Provide basic infrastructure in the industrial areas.
- Acquire land for single unit complexes.
- Acquire land for government agencies for their schemes and infrastructure projects.

Till Now KIADB has established 173 industrial areas spread all over the state and acquired land formerly473 single unit complexes ensuring balanced industrial development in all regionswith well thought of infrastructures and unique features.

1.2 Brief Description of nature of the project

KIADB is proposing Horahalli Industrial Area -4th Phase in an area of 142.59 Ha (352.36 Acres) at Cheeluru and Rampura Villages, Kanakapura Taluk, Ramanagara District, Karnataka State.

1.3 Need for the Project and its Importance to the Country & the Region

In order to develop the socio economic conditions, infrastructural developments and allother area developments, setting up of industries and establishing Industrial Area isessential. In view of this, the industrial area at Harohalli is proposed keeping in view of the required availability of resources in terms of manpower, raw materials and otherclimate & general infrastructure.

Due to the proposed project,

- There will be positive impacts on the socio – economic status of the surrounding areas.
- More employment opportunities will be generated.
- Physical infrastructure development such as improvement to roads, UGD lines, street lights etc. will be developed.

1.4 Demand – Supply Gap

KIADB has already developed Horahalli Phase 1,2, and 3 in the vicinity. The industries located here will be the potential source of business for the proposed 4th phase. The establishment of listed industries in the proposed Industrial Area4th- Phase will also bring more employment opportunities.

1.5 Import vs. indigenous production

The proposed Industrial Area is specifically envisaged for promoting large and medium scale operations. Hencethere is a huge potential with respect to marketing and trade products in domestic and export trading.

1.6 Export possibility

The indigenous production of such products will boost the opportunity to export. The proposed Industrial Area will have all Infrastructures to draw new industries with the advantage of nearness of the site to Bangalore.

1.7 Employment Generation due to the project

Man power requirement during construction phase is estimated to be 100 numbers and during operation phase it is estimated to be 7500 numbers.

1.8 Project Benefits

- Generation of employment to local youth**.**
- The proposed activity will not require human displacement or will involve habitat loss.
- The project will also contribute in increase in revenue in the form of various taxes, which will be paid to Government time to time.

2. PROJECT DESCRIPTION

2.1 Type of the project

The project is termed under Schedule 7 (c)– Category 'A', as per EIA notification 2006 and its subsequent amendments, as KIADB is proposing to establish Red category industries within the proposed Horahalli 4th Phase industrial area, as similar as Phases 1,2 and 3 of Horahalli Industrial Area.

2.2 Project location

The project is proposed at S.Nos. - Cheeluru village - 223/1, 223/2, 223/3, 223/5, 223/6,223/7, 226/2, 226/3, 226/6, 227/1, 227/2, 227/3, 227/4, 227/5, 227/6, 227/7, 227/8, 227/9, 227/10, 227/11, 227/12, 227/13, 227/14, 387, 388, 388/1, 388/2,388/3, 388/4, 388/5,395, 396, 438, 440/1, 440/2, 440/3, 440/4, 448, 449/1, 449/2, 449/3, 450, 459, 466, 470/1, 470/2, 470/3, 470/4, 470/5, 470/6, 470/7, 471, 472, 473, 474, 478, 479/1, 479/2, 480, 481.

Rampura village - 101/1, 101/2, 101/3, 101/4, 129/8, 113p, 162, 167, 168, 169/3, 169/4, 169/5, 169/6, 178/1, 178/2, 190/1, 190/2, 194, 196,223, 224, 225, 227, 234, 235, 236, 241, 242, 243, 244, 247, 249, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272/1, 272/2, 273, 274, 275, 276 of Kanakapura Taluk, Ramanagara District, KarnatakaState..

The Project Index map is given in**Figure 2-1**, Satellite imagery of project site is given in **Figure 2-2**and Approach to the site is given in**Figure 2-3**. Site photographs are given in **Figure 2-4**and the site layout is given in **Figure 2-5.**A google map showing few developmental activities within the industrial area and is presenting in**Figure 2-5A, and Figure 2-5B and Figure 2-6C**

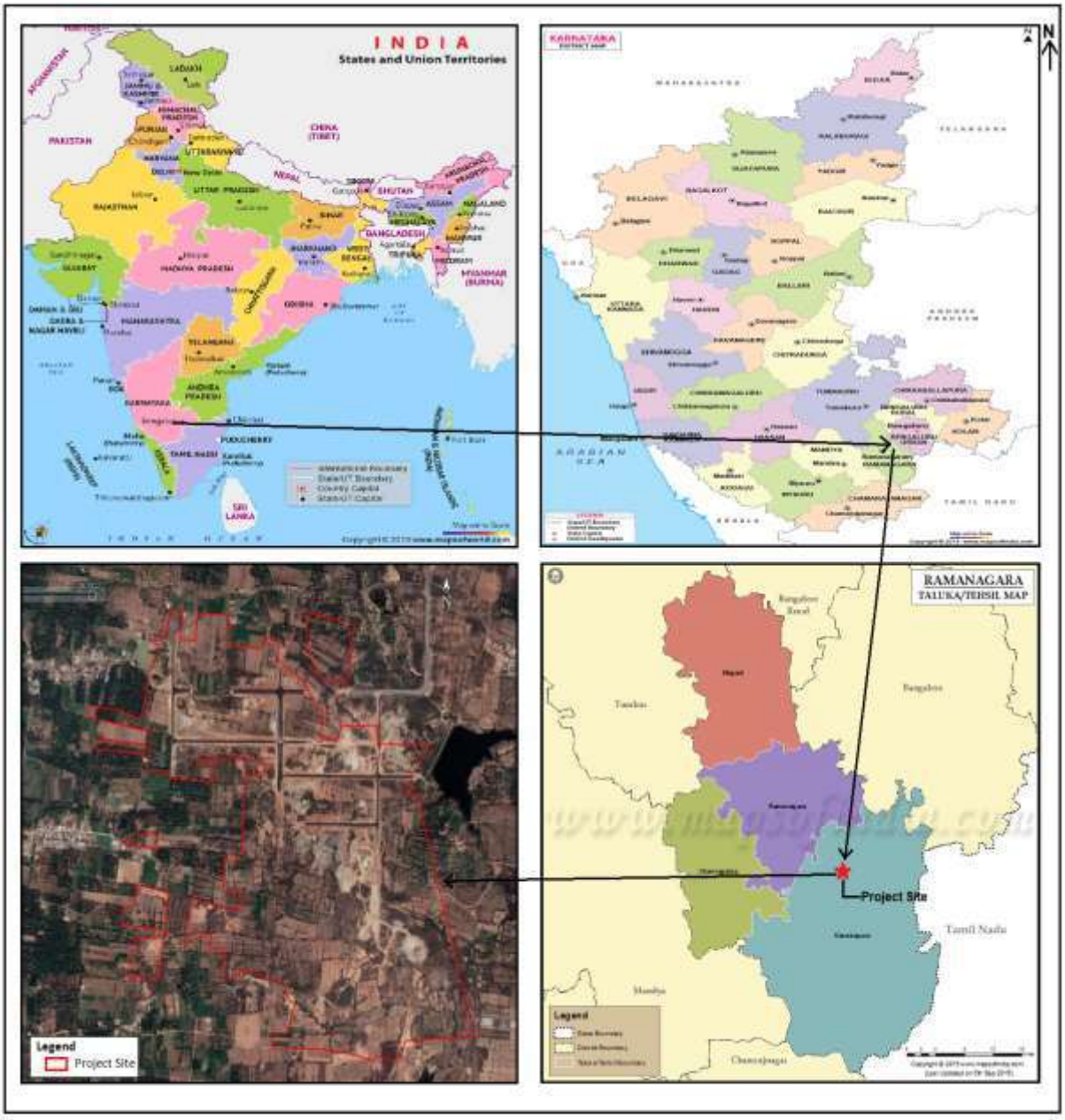


Figure 2-1 Index Map of Project location

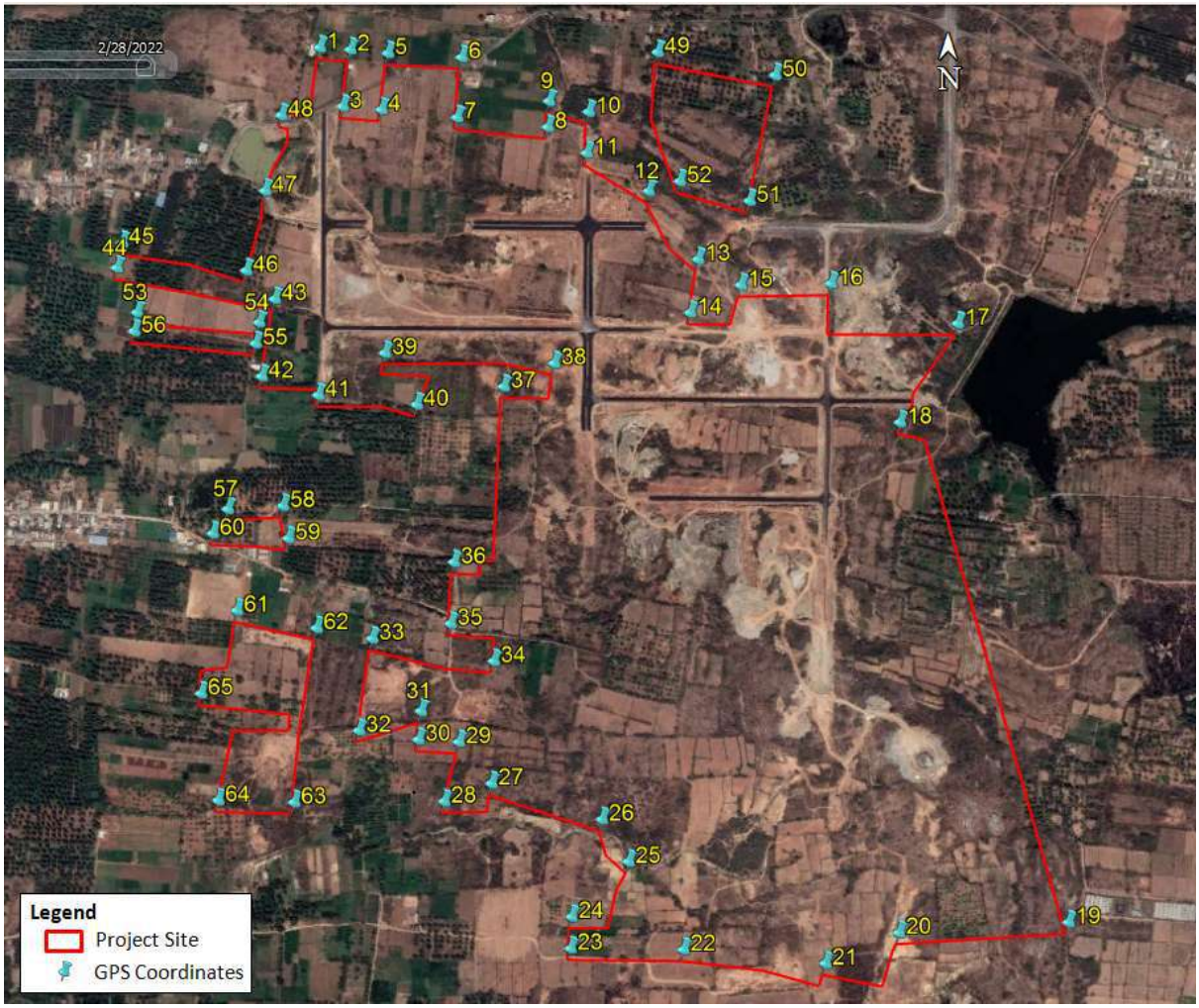
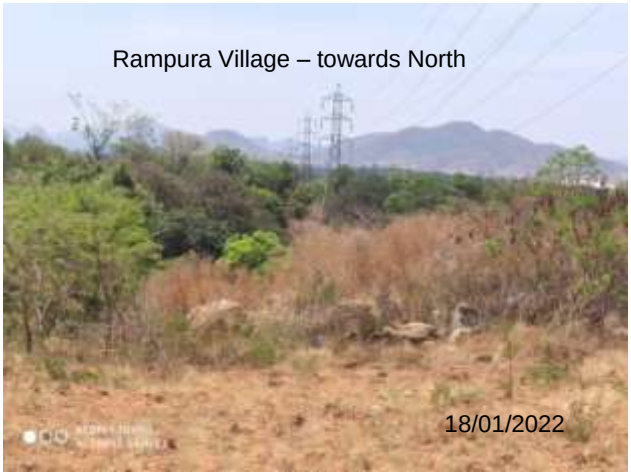


Figure 2-2Google image of project Site

Figure 2-3 Approach to the site from 3rd Phase



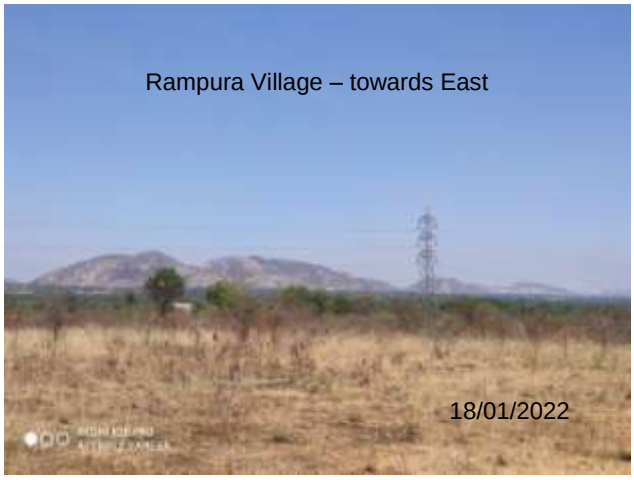


Figure 2-4 Site Photographs

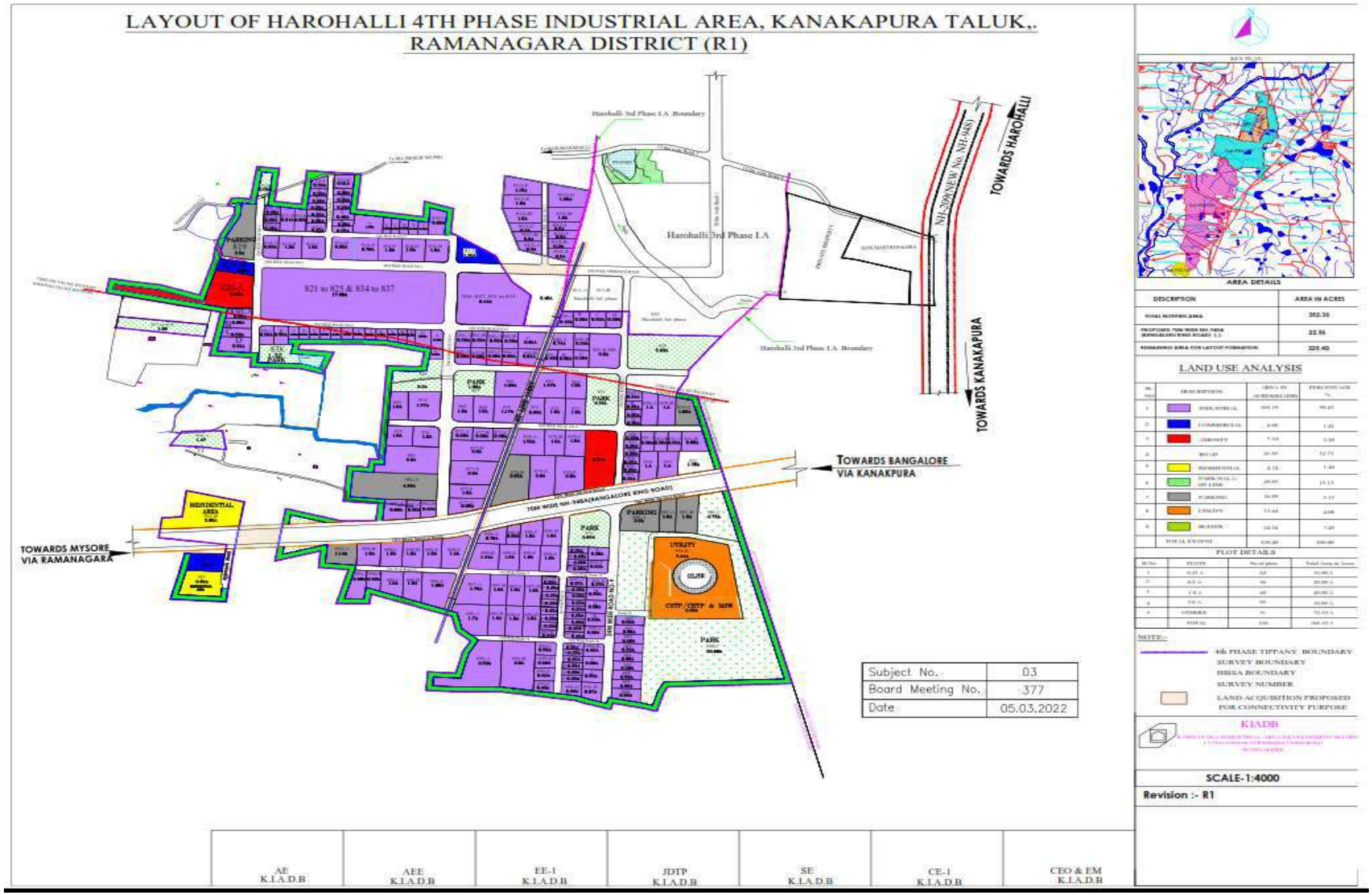


Figure 2-5 Proposed site layoutof 4th Phase Horahalli Industrial Area

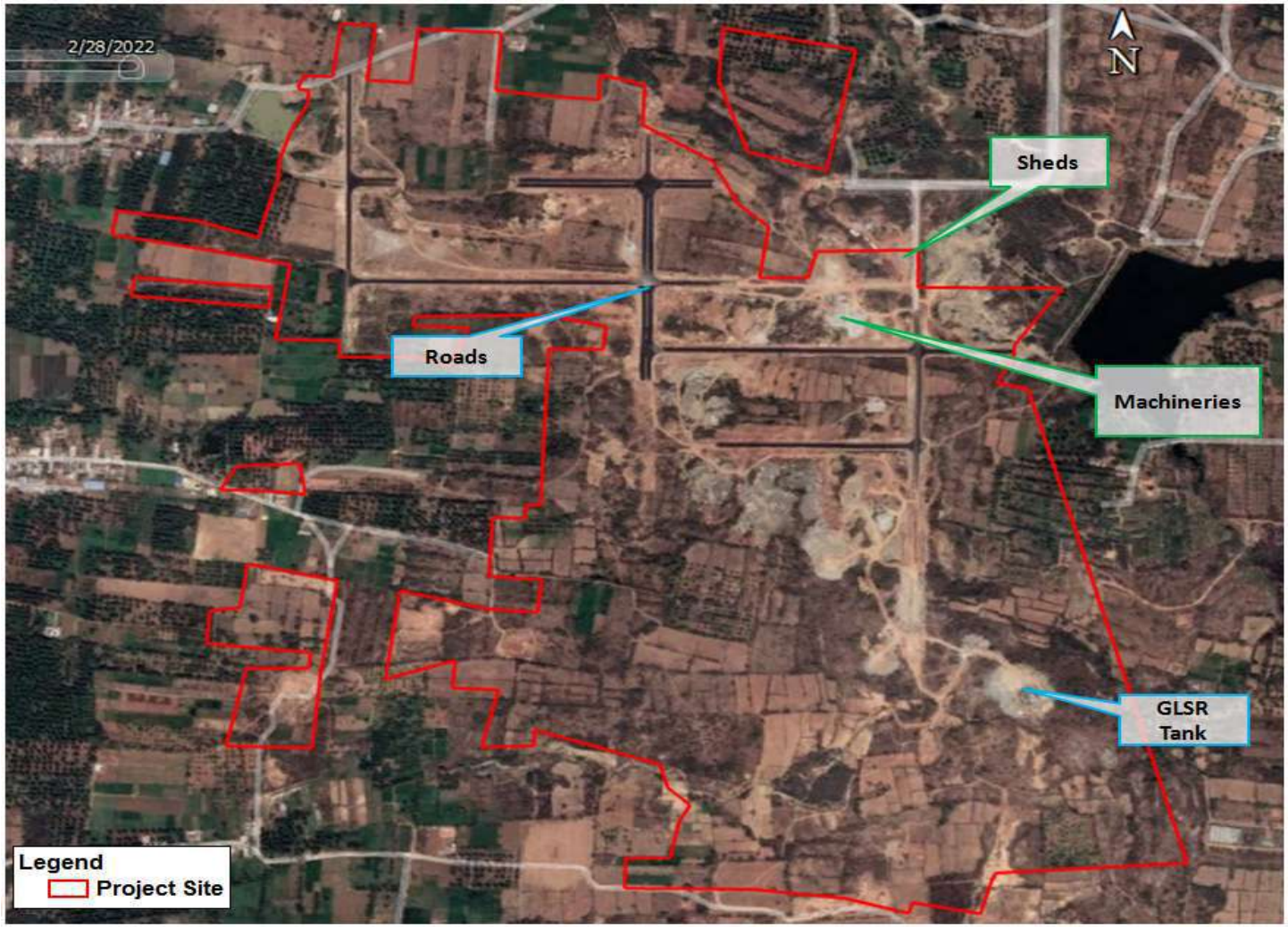


Figure 2-5A: Present site* developmental activities

Figure 2-5B: Present site* developmental activities

Figure 2-5C: Present site* developmental activities

2.3 Project Cost

Project cost for the proposed project is Rs.**36128.98** Lakhs

2.4 Details of Alternate sites considered

No alternative sites are considered since the project is close proximity to Horahalli Industrial Area – Phase 1, 2 and 3.

2.5 Magnitude of Operation

Area break up for Harohalli Industrial Area 4th Phase is given in Table 2-1. Developable are is 142.595 Ha (329.40 Acres).

Table 2-1Proposed Area break up

S.No	Type of Area	Area in Acres (KIADB)	Area in %
1	Industrial	166.19	50.45
2	Commercial	4.66	1.41
3	Amenity	7.24	2.20
4	Road	41.85	12.71
5	Residential	4.74	1.44
6	Park / Nala/ HT line	49.85	15.13
7	Parking	16.89	5.13
8	Utility	13.44	4.08
9	Buffer	24.54	7.45
	Total	**329.40**	**100**
10	NH-Roads Area	22.96	**-**
	Total	**352.36**	**-**

2.6 Type of industries proposed

The type of industries proposed for the project is given inas per EIA Notification 2006 and its amendments are proposed for the project.

Table 2-2 Type of industries proposed for the project

S. No	Focus Sector	Anticipated Types of Industries	Activities	Categorization of industry as per EIA notification	Categorization as per CPCB	Pollution Potential
1	Engineering	Fabricated Metal products	Manufacturing of pressure vessels	Not Applicable	Orange	W13, A1D
2		Automobiles	Manufacture of motor vehicles (Two wheelers, Cars etc)	Not Applicable	Red	A1C; W11; HW3 & HW4
3		Automobile components	Manufacture of parts and accessories for motor vehicles such as Engine, Gear box parts, Drive axle, steering and suspension, breaks, Seats, Tyres, rubber products etc	Not Applicable	Orange, green, white	W11, A1C,E,F,G
4		Fibre glass manufacturing	Manufacturing of fibre glass and processing	Not applicable	Red	A2F1, HW1, HW4
5		Batteries Manufacturing	Lead acid batteries manufacturing	Nil	Red	A1G, HW1, HW4, W12
6	Food and beverages	Instant tea/coffee, Coffee processing, Non- alcoholic beverages, processing industries, dairy and dairy products.	-	Not Applicable	Orange	W13, A1D
7	Other Industries	Manufacturing of vegetable oils	-	Nil	Orange	W12, Group A1G
8		Coated electrode manufacturing	-	Nil	Orange	W12, Group A1F
9		Tile manufacturing	-	Nil	Orange	Group A2F2,

S. No	Focus Sector	Anticipated Types of Industries	Activities	Categorization of industry as per EIA notification	Categorization as per CPCB	Pollution Potential
10		Paint	Blending and mixing	Nil	Orange	Group A1G, W12, HW1, HW4
11	Fish and poultry feed	Fish, poultry and cattle feed manufacturing	-	Nil	Orange	Group A1G
12	Printing	Printing ink manufacturing	-	Nil	Orange	W12, Group A1G, HW1, HW4
13		Printing press	-	Nil	Orange	W12, Group A1G, HW1, HW4
14		Silk screen printing	-	Nil	Orange	W12, Group A1G, HW1, HW4
15	Other	Polluting industries Manufacuring of MDF & Ply Boards, Package industries, E-waste recycling, Manufacturing of Cement products, Hazardous Waste Incineration facility, Fish and cattle feed manufacturing units,		Yes	Red	
16	Other Non EC category industries (as per the re-categorization of Industries by CPCB February 29, 2016 – Red, Orange, Green Category) which are not listed in the following table, but envisaged in the future will be accommodated with stringent pollution control norms, following siting guidelines, without affecting the surrounding environment and local natural resources including flora-fauna.					

Source: As per CPCB classification of industries dated February 29, 2016

Water Pollution

a) W11 - Waste-water which is polluted and the pollutants are -
   - not easily biodegradable (very high strength waste waters having BOD > 5000 mg/l); or
   - toxic; or
   - both toxic and not easily biodegradable. (Presence of criteria water pollutants having prescribed standard limits up-to 10 mg/l or having BOD > 5000 mg/l).

b) W12 - Non-toxic high strength polluted waste-water having BOD in the range of 1000-5000 mg/l and the pollutants are biodegradable. (Presence of criteria water pollutants having prescribed standard limits from 11 mg/l to 250 mg/l and having BOD strength in the range of 1000-5000 mg/l).

c) W13 – Non-toxic- polluted waste-water having BOD below 1000 mg/l and the pollutants are easily biodegradable. (Presence of criteria water pollutants having prescribed standard limits from 11mg/l to 250 mg/l and having BOD strength below 1000 mg/l).

Air Pollution

a) A1A – Presence of criteria air pollutants having prescribed standard limits up - to 2 mg/Nm^3

b) A1B – Presence of criteria air pollutants having prescribed standard from 3to10 mg/Nm^3

c) A1C – Presence of criteria air pollutants having prescribed standard from 11 to 50 mg/Nm^3

d) A1D – Presence of criteria air pollutants having prescribed standard from 51 to 250 mg/Nm^3

e) A1E – Presence of criteria air pollutants having prescribed standard from 251mg/Nm^3& above.

f) A1F – Generation of fugitive emissions of Particulate Matters which are:
   - Not generated as a result of combustion of any kind of fossil-fuel.
   - Generated due to handling / processing of materials without involving the use of any kind of chemicals.
   - Which can be easily contained /controlled with simple conventional methods

g) A1G – Generation of Odours which are:
   - Generated due to application of binding gums / cements /adhesives /enamels
   - Which can be easily contained /controlled with simple conventional methods

h) A2F1 – All such industries in which the daily consumption of coal/fuel is more than 24 MT/day and the particular (Particulate/gaseous/process) emissions from which can

be controlled only with high level equipment's / technology like ESPs, Bag House Filters, High Efficiency chemical wet scrubbers etc.

i) A2F2 – All such industries in which the daily consumption of coal/fuel is from 12 MT/day to 24 MT/day and the particular(Particulate/gaseous/process) emissions from which can be controlled with suitable proven technology.

Hazardous waste

a) HW1 – Land disposable HW which requires special care & treatment for stabilization before disposal.
b) HW2 – Incinerable HW
c) HW3 – Land disposable HW which doesn't require treatment & stabilization before disposal. High volume low effect wastes such as fly-ash, phosphogypsum, red-mud, slags from pyro-metallurgical operations, mine tailings and ore beneficiation rejects)
d) HW4 – Recyclable HW, which are easily recyclable with proven technologies.

2.7 Water Requirement

Construction phase

During construction Phase, water requirement is estimated to be 65 KLD. Details of water requirement including water for construction purpose, domestic needs and dust suppression are given in**Table** 2-3.

Table 2-3 Water requirement for construction phase

S. No	Activities	Water Requirement (KLD)
1	Domestic Water	5
2	Water for construction purpose	50
3	Other Uses (Water sprinkling, greenbelt development etc)	10
	Total	**65**

Operation Phase

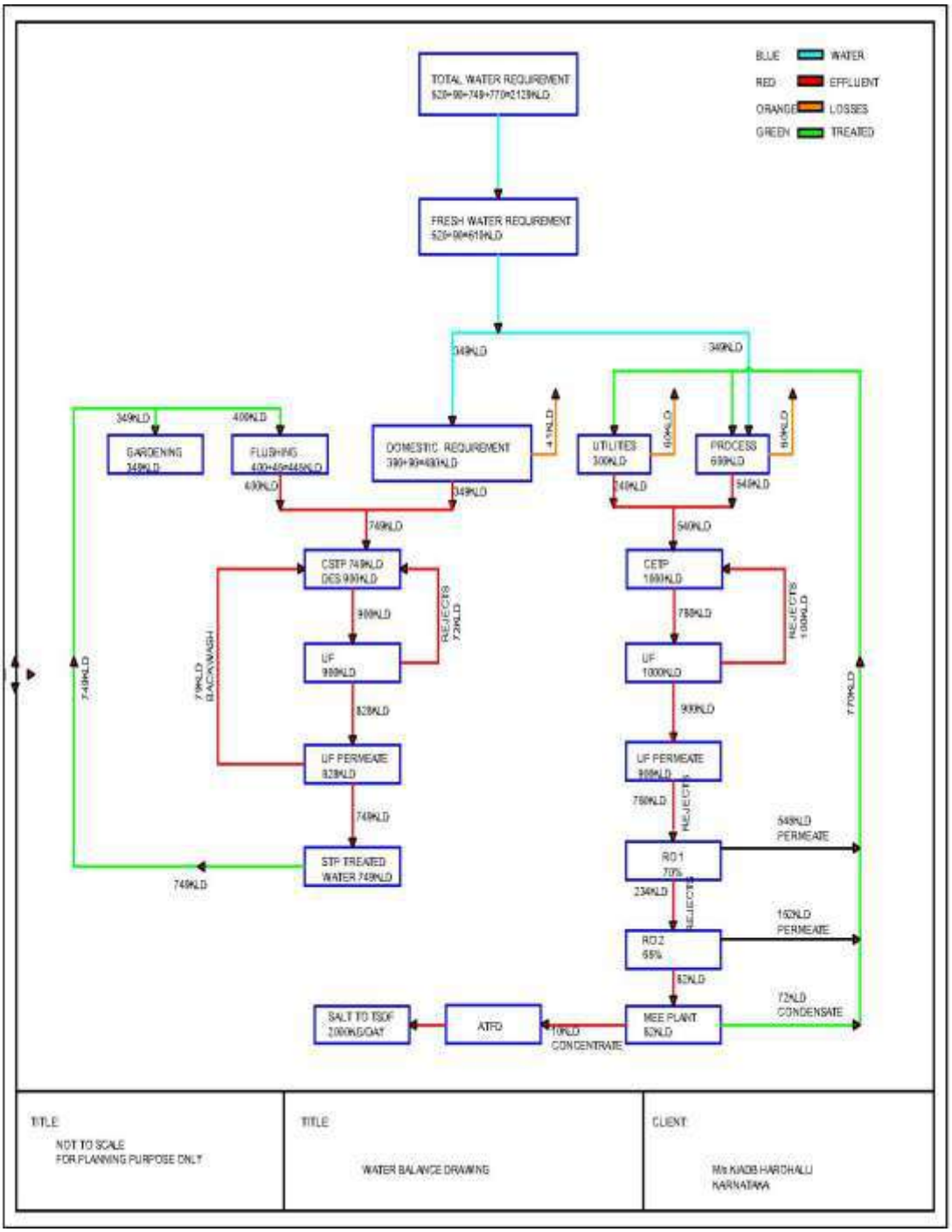
e) Total water requirement for the project is 2039 KLD. Fresh water requirement is 520KLD. Water requirement for greenbelt (349 KLD) and utilities for industrial purpose (300 KLD), process which do not need fresh water (470) and flushing for residential units (400 KLD), will be met from recycling of treated sewage and treated effluent. Estimated water requirement is given in

f) Table 2-4and water balance chart is given in**-Figure 2-6.**

Table 2-4 Water Requirement – Operation phase*

S. No	Water requirement	Water Requirement (KLD)	Total Water Break-up (KLD)	
			Fresh	Recycled
1	Domestic Water	480	480	0
2	Flushing	445	0	400
3	Process	600	130	470
4	Other Utilities	300	0	300
5	Greenbelt	349	0	349
	Total	**2174**	**610**	**1519**

*** Expected only after complete occupation by industries in the industrial area and only then, complete facility will be developed.**



-Figure 2-6 Water Balance for proposed project

Note:The effluent generated from the 4th phase Industrial Area will be treated in proposed 1MLD CETP

2.8 Power and Fuel Requirement

The power requirement for the project will be sourced from BESCOM. Total power requirement is estimated to be 5 MVA. The power requirement, power back up, fuel requirement for boiler, HSD requirement for DG is estimated and given in**Table 2-5.**

Table 2-5Power and fuel Requirement

S.No	Details	Capacity/ quantity	Source
1	Power	5 MVA	BESCOM
2	Back-up (KVA)	Back up by individual industries through DG	

Air pollution Sources will be ensured with stringent air pollution control norms with required height of Chimney and ensured that emissions will be discharged only after complying with the prescribed standard.

2.9 Man power Requirement

Around 100 people will be employed for construction phase and 7500 people for operation phase.

2.10 Air Pollution Control Measures

Individual industries will have their own Air Pollution Control Measures for dispersion of flue gases from utilities and process.

2.11 Waste Management and Disposal Method

2.11.1 Liquid Waste Management

- Total water requirement – 2039KLD
- Effluent generated –780KLD.
- Sewage generated - 749 KLD
- Sewage will be treated inproposedCSTP of 900 KLD and treated sewage will be recycled for green belt development and flushing for residential units.
- Trade Effluent will be treated in Proposed1000 KLD CETP, followed by RO and ATFD.. Treated effluent will be recycled for utilities and process.

2.11.2 Solid Waste Management

- **Municipal Solid Waste**

Table 2-6Solid Waste Generation and Management

Waste	Quantity(kg/day)		Collection method	Treatment / disposal method*
	Construction Phase	Operation Phase		
Organic	27	2025	Bins	Collected and composted at site in common MSW processing area and used for green belt development.
In Organic	18	1350	Bins	Disposed through authorized vendors
Sewage sludge	0.5	100	Bins	Will be dried and used as manure for green belt.

*Expected only after complete occupation by industries in the industrial area and only then, complete facility will be developed.

Norms- @0.45 Kg/capita/day

Population: Construction phase- 100 numbers, operation phase – 7500 numbers.

- **Hazardous Waste**

Individual industries will have their own Hazardous waste storage area, within their unit and the same will be segregated and disposed as per the Hazardous and Other Wastes (Management andTransboundary Movement) amendmentRules, 2016.

3. SITE ANALYSIS

3.1 Connectivity

KIADB is proposing HorahalliIndustrial Park- 4th Phase at Cheeluru and Rampura Villages, Kanakapura Taluk, Ramanagara District, Karnataka State.The site is well connected by roads and railway lines. The salient features of the project site aregiven in **Table 3-1**and Google image showing site connectivity and also presenting 1km, 5km, 10km radius google maps of the study area is given in **Figure 3-1 A, B, C, D.**

Table 3-1Salient Features of the Project Site

S. No.	Particulars	Details
1.	Major Co-ordinates of the project site	Latitude / Longitude: 12°37'48.13"N 77°25'28.58"E; 12°37'2.03"N 77°25'46.90"E; 12°37'0.05"N 77°25'20.04"E; 12°37'14.23"N 77°24'46.96"E (Source KIADB GIS Website)
2.	Elevation	Average 693m above sea level
3.	Present land use	Formerly Cropland, plantation, barren scrub land to be changed for Industrial Use (*Note: Reference- Bhuvan 2012 Landuse/land cover)
4.	Nearest Highway	NH 948 (0.45 Km -E)
5.	Nearest railway Station	Ketohalli railway station-16.60 Km (NW)
6.	Nearest Airport	Bangalore International Airport – 67.61 Km (NNE)
7.	Nearest sea Port	CuddalorePort – 273.96 Km (ESE)
8.	Nearest village	Hanumanahalli –0.14 Km (W)
9.	Nearest major city	Ramanagara – 16.17 (NW)

Figure 3-1A :Google image showing site connectivity

Figure 3-2B :Google image showing 1 km radius of the project site

Figure 3-3C :Google image showing 5 km radius of the project site

Figure 3-4D :Google image showing 10 km radius of the project site

3.2 Landform, Land use and Land ownership

The entire land has been handed over to KIADB and the land documents are enclosed as **Annexure-2**. Site layout is enclosed as **Annexure-1.**

3.3 Topography of District

The uplands are often bare or covered with low scrub jungles and the low lands are dotted with series of irrigation tanks. It represents an uplifted peneplain at an elevation of 900 meters. The surface has been dissected on the western and southern parts of the study unit giving rise to a broken and rugged topography. In the west, the terrain is rugged and broken and is composed of a succession of hills and valleys intersected by rocks and rapid streams with sandy beds. In the south, the hills get closer. The lands are covered with denser vegetation and the general level declines as one moves south towards the Cauvery. The Granite rocks are the most prevalent rocks of Bangalore Metropolitan Region. The Savanadurga Betta is an enormous mass of granite which stands on a base of about 12 km in circumference and rises to a height of 1,207 meters above MSL. The hill consists of two peaks, one called Bilibetta another Karibetta. The Geomorphology of Bangalore is flat except for a ridge in the middle.

Source:https://shodhganga.inflibnet.ac.in/bitstream/10603/107048/10/10_chapter%203.pdf

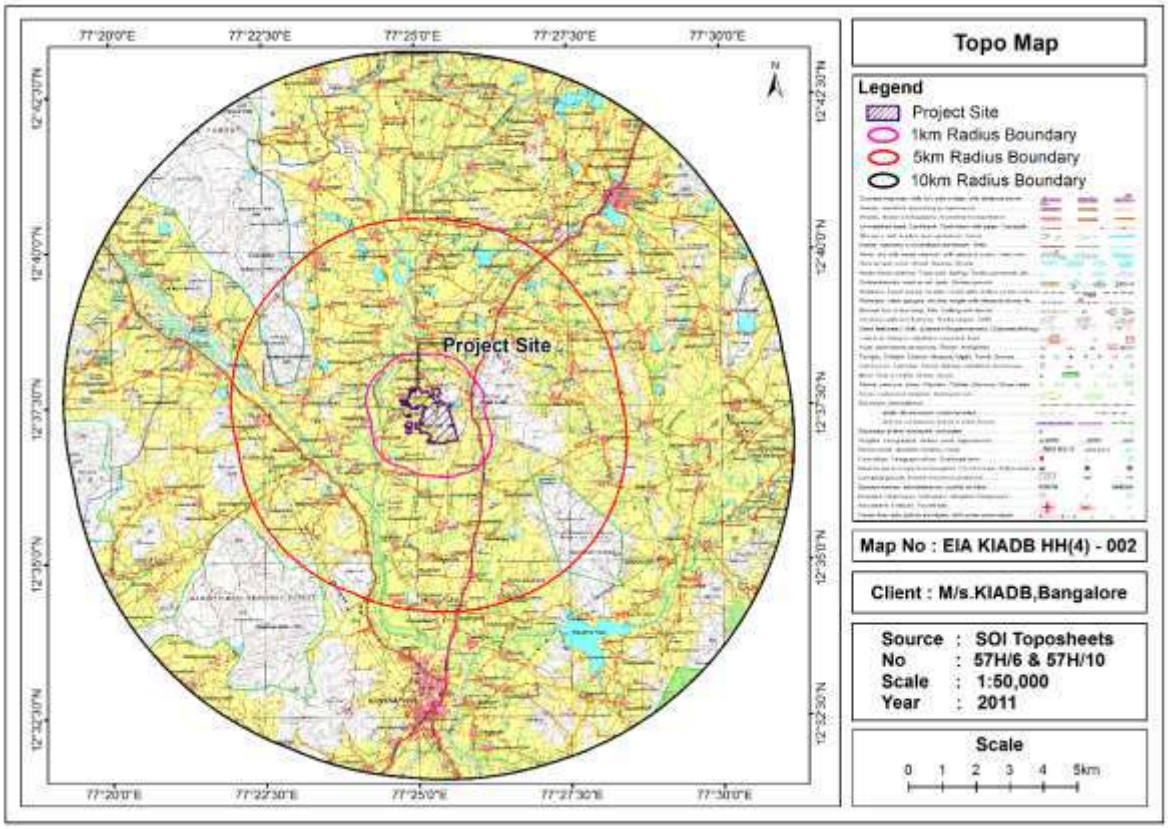


Figure 3-5 Topomap of Study Area

3.4 Existing Land use pattern

Total Project Study Area: 375.7Sq.Km. Land Use /Land Cover statistics of 10 Km radius of the Study Area is given in**Table 3-2**and land Use pattern of Study area is given in LULC map of the Study area is given in**Figure 3-3**.

Table 3-2Land Use/Land Cover statistics of 10 Km radius of the Study Area

S.No	Description	%	Sq.Km	Acres	Hec
1	Plantation	34.56	128.76	31817.24	12876
2	Crop land	32.85	122.41	30248.12	12241
3	Scrub land	7.51	27.99	6916.47	2799
4	Scrub Forest	5.67	21.11	5216.39	2111
5	Barren rocky	4.44	16.54	4087.12	1654
6	Deciduous	3.85	14.33	3541.01	1433
7	Rural	3.63	13.52	3340.86	1352
8	Tanks/Lakhs/Ponds	2.88	10.74	2653.91	1074
9	Urban	2.39	8.9	2199.23	890
10	River/Stream/Canals	1.16	4.34	1072.44	434
11	Mining	0.83	3.11	768.50	311
12	Forest Plantation	0.10	0.38	93.90	38
13	Follow	0.10	0.36	88.96	36
14	Gullied	0.02	0.08	19.77	8
15	Grass / Grazing land	0.01	0.02	4.94	2
		100.00	**372.59**	**92068.85**	**37259**

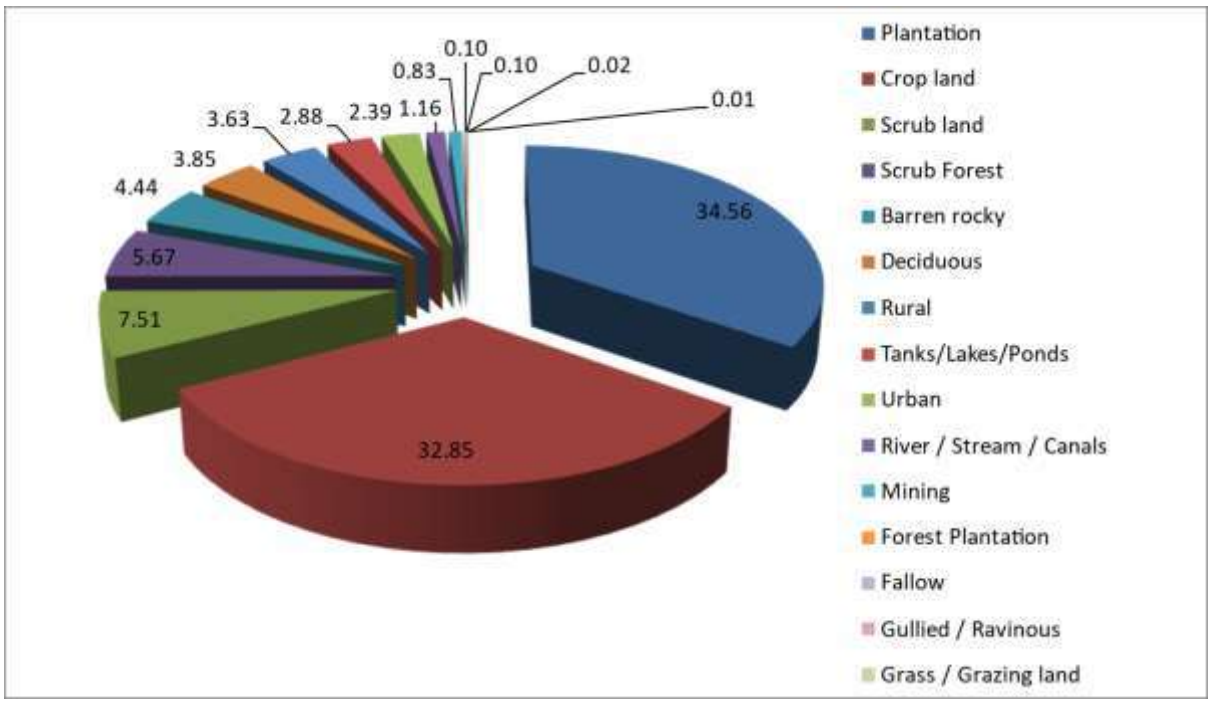


Figure 3-6Land Use Pattern of the Study Area

Bannerghatta National Park ESE and Core area is located within 10 Km radius from the site. The distance and direction is given in **Table 3-3**. Topo map showing the distance of Bannerghatta National Park ESZ from project site is given in **Figure 3-4**. Water bodies within 15 Km radius from project site are given in **Table 3-4**and theReserve forests within 15 Km radius from project site is given in**Table 3-5.**

Table 3-3Environmental Sensitive Places within Study area

S.No	Sensitive area	Distance	Direction
1	Bannerghatta National Park ESZ	8.66 km	SE
2	Bannerghatta National Park Core/Bilikal Betta RF	9.60km	SE

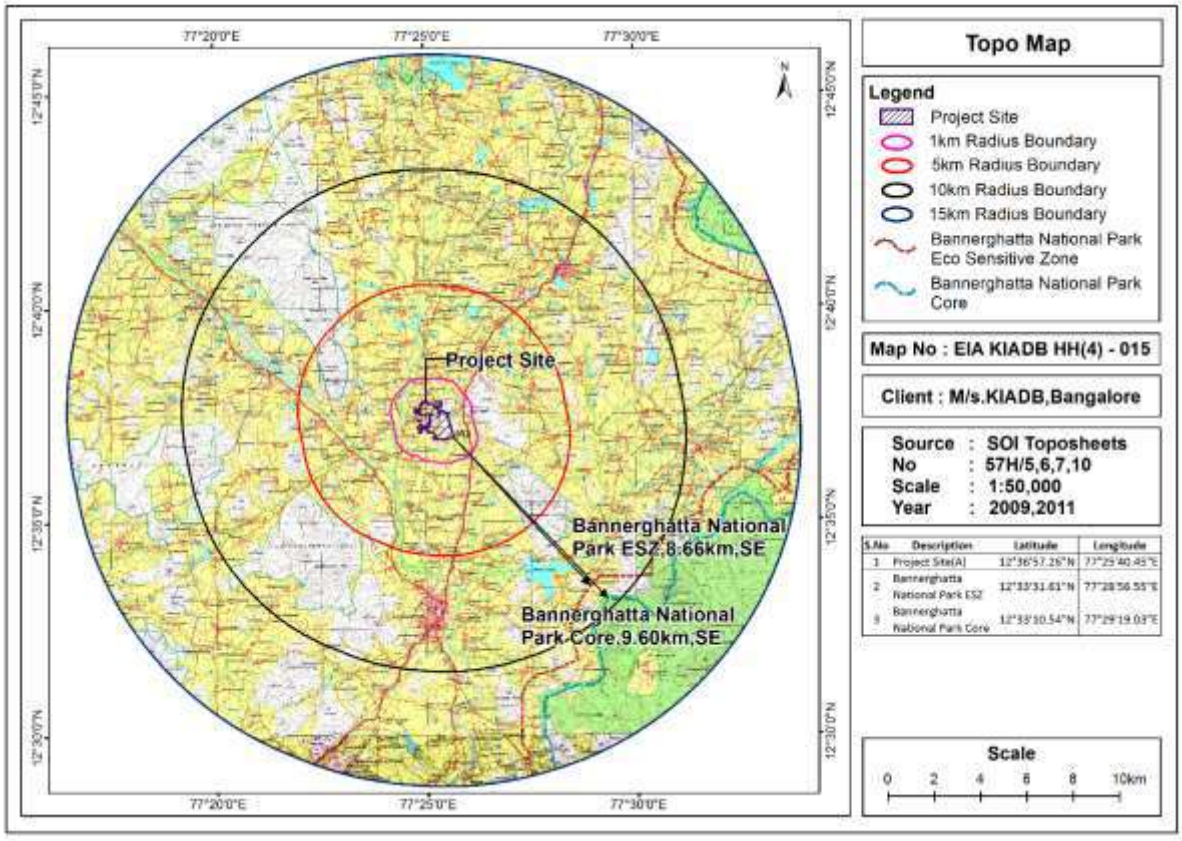


Figure 3-7 Topo map showing the distance of Bannerghatta National Park ESZ from project site

Table 3-4 Water Bodies within Study Area

S.No	Water Bodies	~Distance (Km)	Direction
1	Pond near Project Site	Adjacent to Site	W
2	Lake near Hanumanthanagar	0.06	E
3	Canal near Bannikuppe	0.12	W
4	Suvarnamukhi R	0.53	W
5	Arkavati R	2.08	SW
6	Vrishabhavati R	3.73	N
7	Lake near Kagalhallidoddi	3.79	NNE
8	Bairamangala Left Bank Canal	3.81	N
9	Mavathur Kere	5.98	SSE
10	Gattal Kere Halla	6.13	E
11	Kutle Hole	7.43	SE

12	Suvarnamukhi Reservoir	8.81	NNE
13	Subedaranakerekodihalli Halla	9	ENE
14	Bairamangala Right Bank Canal	9.82	N
15	Rayatmala Hole	10.19	E
16	Antaragange Hole	12.21	E
17	Rayatmala Kere	12.78	E
18	Byramangala Reservoir	13.39	N
19	Kebre Hole	14.45	ESE

Table 3-5 Reserve Forests within Study Area

S.No	Reserve Forests	Distance	Direction
1	Gangadharan Gudda RF	2.48	ESE
2	Handigundi RF	3.16	W
3	Bananthimari RF	4.77	SW
4	Tenginkal RF	8.49	W
5	Bannerghatta National Park ESZ	8.66	SE
6	Bilikal RF	9.45	SE
7	Bannerghatta National Park Core	9.6	SE
8	RF near Kungallu	11.45	NW
9	Bantanal RF	12.35	E
10	Karadikkala RF	13.28	NE

3.5 Soil classification of District

The central part of Ramanagara district is covered by Clay skeletal soil rocky land in combination. Towards south the soil is more coarse loamy and coarse loamy silt. Pokey land is found in the south, south east and east. Towards east, hilly ranges arepresent. More of clayey and clayey loamy soil is found here. Clayey soil is found in a scattered pattern in central and northern part of Ramanagara. Ramanagara soil is favourable for agriculture except the few rugged terrains.

Source:https://shodhganga.inflibnet.ac.in/bitstream/10603/107048/10/10_chapter%203.pdf

3.6 Climate data from secondary sources

The temperature ranges between 33ºC and 16ºC with an average of 24ºC. The summer heat is moderated by occasional thunderstorms and squalls. April is seen to

be the warmest month, with mean temperature of about 27.1ºC and the mean daily maximum of 33.6ºC and the mean monthly highest maximum temperature of 35.3ºC

December is the coldest month with a mean a mean temperature of 20 ºC. January has the lowest daily minimum of 14 ºC and the monthly lowest minimum of 11ºC. However average range of monthly mean temperature is 7ºC.

Ramanagara receives adequate rainfall of about 915 mm from the northeast monsoon as well as the southwest monsoon. The mean number of annual rainy days is about 60 days, based on60 years data analysis. The study area receives its rain under three specific periods, spread over a period of eight months. Ramanagara receives its maximum rainfall (about 54%) from south west monsoon with a rainfall of 496 mm and, that too in just 34 rainy days. The north east rainfall brings about 241 mm in about 14 rainy days. Usually this follows the south west monsoon with a break of few days. Which is the period of summer thunderstorms brings mean rainfall of about 156 mm in 10 rainy days. Thus the wettest months are August, September and October.

Source:https://shodhganga.inflibnet.ac.in/bitstream/10603/107048/10/10_chapter%203.pdf

3.7 Social Infrastructurenear the project site

Details of hospitals near the project site is given in**Table 3-6**, Government buildings in **Table 3-7**, Schools in **Table 3-8** and Colleges in **Table 3-9**.

Table 3-6Hospitals near the project site

Hospitals	Distance(km)	Direction
Psduvanagere PHC	3.47	E
Chikkamuduvadi PHC	4.13	W
Kanakapura Government Hospital	6.65	S
Gollahalli PHC	7.79	NNW
Harohalli CHC	8.35	NE
SRS Betta Government PHC	9.06	W
Doddamaralavadi PHC	10.2	E
Manchegowdana Palya Govt PHC	11.29	NNW
Nanjapura Government PHC	13.11	W
Thoredoddi PHC	14.23	N

Table 3-7 Government buildings near the project site

Government Buildings	Distance(km)	Direction
T.Hosahalli Post Office(BO)	3.75	ENE
Kanakapura Fire Station	4.74	S
Kanakapura Sub Register Office	6.87	S
Kanakapura taluk office	7.45	S
Harohalli Town Panchayat Office	7.57	NE
Harohalli Police Station	7.65	NE
Avverahalli Post Office	8.57	WNW
Kolliganahalli Village Panchayat Office	9.09	N
Kailancha Branch Post Office	10.23	WNW
Kanchugarahalli Grama Panchayat	10.73	NNE
Banavasi Panchayat Office	13.12	E
Byramangala Panchayat Office	13.34	N

Table 3-8 Schools near the project site

Schools	Distance (km)	Direction
Rampura Govt School	1.31	SSW
Thungani Government High School	2.47	SSE
Chikkakalabalu Govt. High School	2.98	NNW
T.Hosahalli Government High school	2.98	ESE
Kurubarahalli Govt School	4.77	N
T Bannikuppe Govt High School	4.9	N
Kadasikopppa Govt high school	7.31	N
Kanakapura Government Girls High School	7.32	S
Harohalli Govt High School	7.69	NE
Thokasandra Govt School	8.12	ESE
Thumbenahalli Govt High School	12.05	NW
Kurubarahalli Government School	12.16	SW

KaaduJakkasandra Govt Primary School	12.51	NE
Byramangala Govt School	13.24	N

Table 3-9 Colleges near the project site

Colleges	Distance (km)	Direction
Jain University	1.91	ENE
Dr. Chandramma Dayanada Sagar Institute of Medical Education & Research	4.12	NE
Kanakpura Govt ITI College	4.57	S
Kanakapura Government First Grade College	5.99	S
Sri Nirvanaswamy College of Nursing	6.54	S
Kanakapura Rural College	7.41	S
Harohalli Govt ITI College	7.98	NE
Harohalli Govt First Grade College	8.01	NE
Aditya's PU College	8.14	S
Amruta Institutions	14.49	N
K R Institutons	14.59	NNE

3.8 Existing infrastructure

Presently the site is a barren land and basic infrastructure like water supply, power supply, storm water drain, CETP CSTP etc. will be provided by KIADB. The site is well connected by roads. Details of industries near the project site are given in **Table 3-10.**

Table 3-10 Industries near the project site

Industries	Distance(km)	Direction
Solar power plant nearGopasandra	0.89	S
Saj Food Products Pvt Ltd	4.5	NNE
Origin Mouldings Pvt Ltd	4.62	NNE
Innova Printing and Packaging Company Pvt Ltd	4.72	NNE
Dairy Classic Icecreams Pvt Ltd	4.78	NNE
Anthem BioSciences Pvt Ltd Unit - II	4.89	NNE
SBEE Cables India Ltd Unit II	4.99	NNE
Arma Engineering	5.01	NNE
Stanzen Engineering Pvt Ltd	5.1	NNE
Micro Plastics Pvt Ltd	5.15	NNE
Parsons Nutritionals Pvt Ltd	5.16	NNE
Bhaskar Book Tech	5.19	NNE

Mahesh Engineering Works	5.22	NE
Rapsri Engineering Products Company Ltd	5.28	NNE
Micro Plastics Pvt Ltd Unit - III	5.35	NNE
Orchid Laminates Pvt Ltd unit - II	5.42	NNE
Metcraft Engineering	5.43	NNE
Horizon packs Pvt Ltd	5.53	NNE
Trishul Winding Solutions Pvt Ltd	5.54	NNE
Armes Maini Storage Systems Pvt Ltd	5.57	NNE
Pagariya Food Products Pvt Ltd	5.57	NNE
Micro Plastics Pvt Ltd Unit - IV	5.6	NNE
A. O. Smith India Water Products Pvt Ltd	5.61	NNE
Orchid Laminates Pvt Ltd	5.72	NNE
Tokai Rubber Auto Parts India Pvt Ltd	5.81	NNE
Big Drum India Pvt Ltd	5.81	NNE
ANS Ppaper Mills Pvt Ltd Unit - II	5.81	N
Adarsha Packaging Pvt Ltd	5.82	NNE
DPK Engineers Pvt Ltd	5.84	NNE
Veer O Metals Pvt Ltd	5.94	NNE
Vashkleen Laundry Services Pvt Ltd	5.96	NNE
Signode India Ltd	5.98	NNE
Naveen Granites	6.05	NNE
Ramesh Enterprises	6.12	NNE
Sonia Organics Unit-ll	6.16	NNE
Saify Ind Plant - V	6.42	NNE
Sakthi Accumulators Pvt Ltd Unit - II	6.44	NNE
Varroc TCPL	6.61	NNE
Vishnupriya Industries Pvt Ltd	6.66	NNE
Basant Betons Unit II	6.77	NNE
Ram Enterprises	6.85	NNE
InnoDI Water Technologies Pvt Ltd	6.87	NNE
Leo Metal Craft Pvt Ltd	7.09	NNE
Krishna Foams Pvt Ltd	7.17	NNE
Vasudha Colours Pvt Ltd Unit II	7.19	NNE
Stovekraft Ltd	7.2	NNE
Saint Gobain India Pvt Ltd	7.33	NNE
ForgePro India Pvt Ltd	7.42	NNE
Bharat Wire Strips	7.76	NNE
Bengaluru cooperative Milk Union Ltd	11.36	S
Laguna Clothing LLP	12.15	SSW

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4. PLANNING BRIEF

4.1 Planning Concept

4.1.1 Manpower Requirement

For proposed construction requirements, around 100 people will be mobilized from nearby areas. For operational phase, there will be 7500 staff.

4.1.2 Land use planning

The Total land available for the proposed project is about 352.36 Acres. Land use breakup for the project is given in **Table 4-1**.

Table 4-1 Land use planning for the project

S.No	Type of Area	Area in Acres (KIADB)	Area in %
1	Industrial	166.19	50.45
2	Commercial	4.66	1.41
3	Amenity	7.24	2.20
4	Road	41.85	12.71
5	Residential	4.74	1.44
6	Park / Nala/ HT line	49.85	15.13
7	Parking	16.89	5.13
8	Utility	13.44	4.08
9	Buffer	24.54	7.45
	Total	**329.40**	**100**
10	NH-Roads Area	22.96	**-**
	Total	**352.36**	**-**

4.1.3 Assessment of infrastructure Demand

Infrastructure like roads, storm water drain, site office, water supply system, solid waste management area is proposed for the project.

4.1.4 Amenities/ Facilities

Amenities like fire station, Occupational Health Centre, commercial area are proposed for this project.

5. PROPOSED INFRASTRUCTURE

5.1 Industrial Area

145.30 Acres of land is proposed for industrial area. The number of plot details is given in **Table 5-1**.

Table 5-1 Plot details for industrial area

S.No	Acre	No. of plots	Total area in Acres
1	0.25	64	16
2	0.5	56	28
3	1	40	40
4	2	5	10
5	Others	51	72.19
Total		216	166.19

5.2 Green belt

Around 24.54 Acres (7.45% of plot area) is proposed for green belt. Apart from this around 49.85 Acres (15.13% of plot area) is proposed for park, nala and HT line (22m buffer) . Hence the total area proposed by KIADB for green belt will be around74.39 Acres (22.58 % of plot area). Individual industries will be mandated to develop 33% of green belt area within their premises. 15m green belt is proposed along the periphery of the Industrial Area.

5.3 Connectivity

The project site is well connected toNH 948 (0.45 Km- E) and SH 3 (2.39 Km –SW)

5.4 Drinking Water Management

Required quantity of water is 2 MLD, it will be supplied by KIADB through Vrishabhavati treatment plant of 1 MLD and Cauvery River water of 1 MLD from BWSSB.

5.5 Industrial waste management

Individual industries will have their own area for segregation and storage of Hazardous waste materials. The same will be disposed as per the Hazardous and Other Wastes (Management and Transboundary Movement) Amendment Rules, 2016.

6. REHABILITATION AND RESETTLEMENT (R &R) PLAN

6.1 R&R

The entire land has been handed over to KIADB for development of Industrial Area. Hence R & R is not applicable for this project.

7. PROJECT SCHEDULE AND COST ESTIMATE

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

Project time line is given in table below

Table 7-1 Project Timeline

S. No	Description	Time Frame
1	Environmental Clearance	December 2022
2	CFE	January 2023
3	Construction activities	February 2023

7.2 Estimated project cost

Project cost for the proposed project is Rs.**36128.98** Lakhs

8. ANALYSIS OF PROPOSAL

8.1 Financial and social benefits

- The project site shall require no displacement of habitation.
- Socio-economic benefit to the locals as it would provide both indirect employment and direct employment during construction and operation of the Industrial Area.
- There will be positive impact on social conditions in and around the site due to the proposed project.

Executive Engineer-1
KIADB, # 14/3, 2nd Floor,
CFS Building, Maharshi Aravinda Bhavan,
Nrupathunga Road, Bengaluru-560001

APPLICATION FOR ENVIRONMENTAL CLEARANCE

FORM -1

(Under Violation)

FOR

"PROPOSED DEVELOPMENT OF HORAHALLI INDUSTRIAL AREA -4th PHASE – Land Area 142.59 Ha[352.36 Acres]"

Located at

VILLAGES: Cheeluru and Rampura

TALUK: Kanakapura

DISTRICT: Ramanagara

STATE: Karnataka

BY

M/s. Karnataka Industrial Areas Development Board

Project is under 7(c) Category 'A' as per EIA Notification 2006 and its amendments (Due to attracting GC conditions and violation SOPs)

Executive Engineer-1

Prepared by

HUBERT ENVIRO CARE SYSTEMS (P) LTD, CHENNAI

August 2022

NABET Accredited vide Certificate No. NABET/EIA/1922/RA0172 valid till 13/10/2022

FORM 1

(I) Basic Information:

S.No.	Item	Details
1	Name of the project/s:	"Proposed development of Harohalli Industrial area - 4th Phase"
2	S. No. in the schedule	7 (c)
3.	Proposed capacity/area/length/ tonnage to be handled/ command area/ lease area/ number of Wells to be drilled.	**142.59 Ha [352.36 Acres]**
4.	New/Expansion/Modernization	New
5.	Existing Capacity, Area etc.	Not applicable
6.	Category of Project i.e.' A' or 'B'	A (under violation, as few developmental works started within the industrial area)
7.	Does it attract the general condition? If yes, please specify.	Yes Bannerghatta National Park ESZ is at a distance of 8.66 Km (SE).
8.	Does it attract the specific condition? If 'yes, please specify.	No
9.	Location	Cheeluru Village and Rampura Villages
	Plot/Survey/Khasra No.	Cheeluruvillage - 223/1, 223/2, 223/3, 223/5, 223/6,223/7, 226/2, 226/3, 226/6, 227/1, 227/2, 227/3,227/4, 227/5, 227/6, 227/7, 227/8, 227/9, 227/10, 227/12, 227/13, 227/14, 387, 388, 388/1, 388/2,388/3, 388/4, 388/5,395, 396, 438, 440/1, 440/2, 440/3, 440/4, 448, 449/1, 449/2, 449/3, 450, 459, 466, 470/1, 470/2, 470/3, 470/4, 470/5, 470/6, 470/7, 471, 472, 473, 474, 478, 479/1, 479/2, 480, 481. Rampuravillage - 101/1, 101/2, 101/3, 101/4, 129/8, 113p, 162, 167, 168, 169/3, 169/4, 169/5, 169/6, 178/1, 178/2, 190/1, 190/2, 194, 196,223, 224, 225, 227, 234, 235, 236, 241, 242, 243, 244, 247, 249, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272/1, 272/2, 273, 274, 275, 276.
	Village	Cheeluru and Rampura
	Tehsil	Kanakapura
	District	Ramanagara
	State	Karnataka
10.	Nearest railway station/airport along with Distance in kms.	Ketohalli railway station ~16.60 Km (NW) Nearest airport –Kempegowda International Airport ~67.75 Km (NNE).
11.	Nearest Town, city, District Headquarters Along with distance in kms.	Town -Kanakapura ~6.20 Km (S) City – Bengaluru~28 Km (NNE)

S.No.	Item	Details
		District headquarters Ramanagara ~ 17.15km, (NW)
12.	Village Panchayats, ZillaParishad, Municipal Corporation, Local body (complete postal Address with telephone nos. to be given)	1.Rampura GramPanchayat Rampura Post Office, KanakapuraTaluk, Ramanagara District, Karnataka - 562160 2.Cheelur Gram Panchayat Cheelur B.O Post Office, Kanakapura, Ramanagar, Karnataka-562112
13.	Name of the applicant	Executive Engineer-1 Karnataka Industrial Areas Development Board
14.	Registered Address	Maharishi Aravind Bhavan, 14/3, 2nd Floor, Nrupatunga Road, Bangalore
15.	Address for correspondence:	Maharishi Aravind Bhavan, 14/3, 2nd Floor, Nrupatunga Road, Bangalore
	Name	Executive Engineer-1
	Designation (Owner/Partner/CEO)	Executive Engineer
	Address	Maharishi Aravind Bhavan, 14/3, 2nd Floor, Nrupatunga Road, Bangalore
	Pin Code	560 001
	E-mail	do1@kiadb.in
	Telephone No.	080 -22117372
	Fax No.	-
16.	Details of Alternative Sites examined, if any. Location of these sites should be shown on a topo sheet.	No
17.	Interlinked Projects	No
18.	Whether separate application of interlinked Project has been submitted?	No
19.	If yes, date of submission	NA
20.	If no, reason	NA
21.	Whether the proposal involves approval / clearance under: if yes, Details of the same and their status to be given. (a) The Forest (Conservation) Act, 1980? (b) The Wildlife (Protection) Act, 1972 (c) The C.R.Z. Notification, 1991?	Not applicable Since Bannerghatta National Park ESZ is ~8.66 Km (SE). *****As per Bannerghatta Notification No 931 dated 11 March 2020, the Eco sensitive zone is to be an extent of 1Km from the boundary of Bannerghatta National Park. Topo map marking the distance of the proposed site from Bannerghatta National Park ESZ is enclosed as **Annexure -1**
22.	Whether there is any Government Order/ Policy relevant/ relating to the site?	No
23.	Forest land involved (hectares)	NA

S.No.	Item	Details
24.	Whether there is any litigation pending against the project and /or land in which the project is propose to be set up? (a) Name of the Court Case No. Orders/directions of the Court, if any and its relevance with the proposed project.	No

- *Capacity corresponding to sectoral activity (such as production capacity for manufacturing, mining lease area and production capacity for mineral production, area for mineral exploration, length for linear transport infrastructure, generation capacity for power generation etc.,)*

(II) Activity

1. Construction, operation or decommissioning of the Project involving actions, which will cause physical changes in the locality (topography, land use, changes in water bodies, etc.)

S.No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
1.1	Permanent or temporary change in land use, land cover or topography including increase in intensity of land use (with respect to local land use plan)	Yes	The land has been acquired by KIADB for development of Industrial Area. There will be permanent change of land use to industrial.
1.2	Clearance of existing land, vegetation and buildings?	Yes	Existing shrubs and bushes will be cleared before construction activities.
1.3	Creation of new land uses?	Yes	There will be permanent change of land use pattern to industrial area.
1.4	Pre-construction investigations E.g. bore houses, soil testing?	No	Will be done after obtaining Environmental Clearance
1.5	Construction works?	Yes	The proposed project is development of Industrial Area. Common facilities like site office, Roads and storm water drains, water supply system, solid waste management system and Occupational health center are proposed for the project. Individual industries upon establishment will give the details regarding construction activities in their EC /CFE application as applicable.
1.6	Demolition works?	No	Not applicable
1.7	Temporary sites used for construction works or housing of construction workers?	No	During the construction period, within the site, specificarea will be allotted for storing construction materials. Since the project is development of industrial Area, only common facilities like site office, Roads and

S.No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
			storm water drains, water supply system, solid waste management system and Occupational health center are proposed. Local people will be hired for construction purpose. There will be no housing provided for construction workers.
1.8	Above ground buildings, structures or earthworks including linear structures, cut and fill or excavations	Yes	For the development of basic infrastructure like site office, Roads and storm water drains, water supply system, solid waste management system and Occupational health center, there will be excavations. Excess earth, if any, after back filling will be used for road development. Top soil will be preserved and used for green belt development.
1.9	Underground works including mining or tunneling?	No	Not applicable
1.10	Reclamation works?	No	Not applicable
1.11	Dredging?	No	Not applicable
1.12	Offshore structures?	No	Not applicable
1.13	Production and manufacturing processes?	Yes	The proposal is for development of Industrial Area to cater industries such as Engineering and Fabrication, Automobile units, Pharmaceuticals, Food and Beverage units, Paint blending units, printing units, Manufacturing of MDF & Ply Boards, Package industries, E-waste recycling, Manufacturing of Cement products, Hazardous Waste Incineration facility, Fish and cattle feed manufacturing units, and other Red category industrieswhich fall under EC category. Other Non EC category industries (as per the re-categorization of Industries by CPCB February 27, 2016 – Red, Orange, Green Category) which are not stated above, but envisaged in the future will be accommodated with stringent pollution control norms, following siting guidelines, without affecting the surrounding environment and local natural resources including flora-fauna. Individual industries upon establishment will apply for obtainingEC/ CFE as applicable in which the details will be provided.
1.14	Facilities for storage of goods or materials?	Yes	During construction phase, designated area will be proposed for storing construction materials. During operational phase, individual industries will have their own designated storage areas for raw materials and finished products.

<table>
<tr><th>S.No.</th><th>Information/Checklist confirmation</th><th>Yes/No</th><th>Details thereof (with approximate quantities /rates, wherever possible) with source of information data</th></tr>
<tr><td>1.15</td><td>Facilities for treatment or disposal of solid waste or liquid effluents?</td><td>Yes</td><td>
<table>
<tr><th>S.No.</th><th>Component</th><th>Construction phase (Kg/day)</th><th>Operation phase (Kg/day)</th><th>Disposal Method*</th></tr>
<tr><td rowspan="2">1</td><td>MSW Organic waste</td><td>27</td><td>2025</td><td>Organic wastes will be composted at site and used as manure for green belt development.</td></tr>
<tr><td>MSW Inorganic waste</td><td>18</td><td>1350</td><td>Inorganic wastes will be sold to KSPCB authorized recyclers</td></tr>
<tr><td>2</td><td>Hazardous waste</td><td>Used oil from construction DGs</td><td>Individual industries will have their own hazardous waste storage area within their site</td><td>Disposed as per Hazardous waste (management, handling and Transboundary movement) amended Rules 2016.</td></tr>
<tr><td>3</td><td>Sewage Treatment</td><td>Mobile STP of 5 KLD will be installed at site.</td><td>CSTP of 900 KLD is proposed</td><td>Treated sewage will be recycled for green belt development and flushing for residential units</td></tr>
<tr><td>4</td><td>Effluent treatment</td><td>Contaminated water from construction activities will be taken to a settling tank and the settled water will be used for construction purpose.</td><td>CETP of 1MLDcapacity is proposed and land is allocated.</td><td>Treated effluent will be recycled for utilities and green belt development</td></tr>
</table>
Note:*Expected only after complete occupation by industries in the industrial area and only then, complete facility will be developed.
Manpower :100 persons during construction phase and 7500 persons during operation phase
MSW generation-@0.45 kg/capita/day as per MoEF
</td></tr>
</table>

S.No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
			Construction manual.
1.16	Facilities for long term housing of operational workers?	Yes	In the layout around 4.74 Acres is proposed for residential development. Layout is enclosed as **Annexure-2.**
1.17	New road, rail or sea traffic during construction or operation?	No	There is proposal for development of NH948 A (Bangalore Ring Road) along the project site by National Highways Development Authority and the same is given in the layout. Internal roads are proposed for movement of vehicles within the Industrial Area.
1.18	New road, rail, air waterborne or other transport infrastructure including new or altered routes and stations, ports, airports etc?	No	There is proposal for development of NH948 A (Bangalore Ring Road) along the project site by National Highways Department and the same is given in the layout. Internal roads are proposed for movement of vehicles within the Industrial Area. There is no proposal for alteration of routes and stations, ports, airports etc.
1.19	Closure or diversion of existing transport routes or infrastructure leading to changes in traffic movements?	No	Not applicable
1.20	New or diverted transmission lines or pipelines?	No	HT lines are passing through theareaalong the site in N-S direction. The same will be maintained with green belt buffer.
1.21	Impoundment, damming, culverting, realignment or other changes to the hydrology of watercourses or aquifers?	Yes	Culverts are proposed for the project, since there is a nala crossing the site. The existing nala will not be disturbed.
1.22	Stream crossings?	Yes	There is a seasonal nala crossing the site, which will be maintained as such. 10 m Green belt buffer is proposed along the sides of nala.
1.23	Abstraction or transfers of water form ground or surface waters?	Yes	Total water requirement for the project is 2039 KLD(Estimated quantity is generated only after all the industries are established and operational).Fresh water requirement is estimated to be 520KLD. Remaining 1519 KLD of water requirement will be met from recycling of treated wastewater.BWSSB has allocated Potable water of 13.50 MLD capacity, Vide Order No. BWSSB CE(R) TA-10 D-198/2012-13, which is sufficient to meet Fresh Water demand (1 MLD) for Harohalli4th Phase Industrial

S.No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
			Area and also Remaining quantity water (1 MLD) will be met from the proposed 30MLD TTP at Bidadi Industrial Area and is enclosed as **Annexure- 3.**
1.24	Changes in water bodies or the land surface affecting drainage or run-off?	No	There will be no change in water bodies or land surface affecting drainage or run off
1.25	Transport of personnel or materials for construction, operation or decommissioning?	Yes	This will be done through existing road.
1.26	Long-term dismantling or decommissioning or restoration works?	No	Not applicable
1.27	Ongoing activity during decommissioning which could have an impact on the environment?	No	Not applicable
1.28	Influx of people to an area in either temporarily or permanently?	Yes	During construction phase influx of around 100 persons and during operation phase around 7500 persons are estimated temporarily.
1.29	Introduction of alien species?	No	Not applicable
1.30	Loss of native species or genetic diversity?	No	Not applicable
1.31	Any other actions?	No	Not applicable

2. Use of Natural resources for construction or operation of the Project (such as land, water, materials or energy, especially any resources which are non-renewable or in short supply):

S.No.	Information/checklist confirmation	Yes/ No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
2.1	Land especially undeveloped or agricultural land (ha)	No	The entire land has been acquired by KIADB for development of Industrial area. Land documents are enclosed as **Annexure-4.**
2.2	Water (expected source &competing users) unit: KLD	Yes	Total water requirement for the project is 2039 KLD(Estimated quantity is generated only after all the industries are established and operational).Fresh water requirement is estimated to be 520KLD. Remaining 1519 KLD of water requirement will be met from recycling of treated wastewater.BWSSB has allocated Potable water of 13.50 MLD capacity, Vide Order No. BWSSB CE(R) TA-10 D-198/2012-13, which is sufficient to meet Fresh Water demand (1 MLD) for Harohalli4th Phase Industrial Area and also Remaining quantity water (1 MLD) will be met from the proposed 30MLD TTP at Bidadi Industrial

<table>
<tr><th>S.No.</th><th>Information/checklist confirmation</th><th>Yes/ No</th><th>Details thereof (with approximate quantities /rates, wherever possible) with source of information data</th></tr>
<tr><td></td><td></td><td></td><td>Area and is enclosed as Annexure- 3.</td></tr>
<tr><td>2.3</td><td>Minerals (MT)</td><td>No</td><td>Not applicable.</td></tr>
<tr><td>2.4</td><td>Construction material – stone, aggregates, sand / soil (expected source – MT)</td><td>Yes</td><td>Needed for infrastructure facilities and will be sourced from local suppliers.
Top soil excavated during construction activities will be stored and used for construction work / landscape development / Greenbelt development within the project site</td></tr>
<tr><td>2.5</td><td>Forests and timber (source – MT)</td><td>No</td><td>Not applicable</td></tr>
<tr><td>2.6</td><td>Energy including electricity and fuels (source, competing users) Unit: fuel (MT), energy (MW)</td><td>Yes</td><td><table><tr><th>S.No</th><th>Power requirement</th><th>Back up</th></tr><tr><td>1</td><td>5MVA from BESCOM</td><td>Back up by individual industries through DG</td></tr></table>Air pollution Sources will be ensured with stringent air pollution control norms with required height of Chimney and ensured that emissions will be discharged only after complying with the prescribed standard.</td></tr>
<tr><td>2.7</td><td>Any other natural resources (use appropriate standard units)</td><td>No</td><td>Not applicable</td></tr>
</table>

3. Use, storage, transport, handling or production of substances or materials,which could be harmful to human health or the environment or raise concerns about actual or perceived risks to human health.

S.No.	Information/Checklist confirmation	Yes/ No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
3.1	Use of substances or materials, which are hazardous (as per MSIHC rules) to human health or the environment (flora, fauna, and water supplies)	No	The proposal is for development of Industrial Area, which do not need any hazardous material. Individual industries will apply for obtaining EC/ CFE as applicable, in which the details will be provided.
3.2	Changes in occurrence of disease or affect disease vectors (e.g. insect or water borne diseases)	No	Not applicable
3.3	Affect the welfare of people e.g. by changing living conditions?	No	Not applicable, as the land is already acquired for the industrial area development.
3.4	Vulnerable groups of people who could be affected by the project e.g. hospital patients, children, the elderly etc.,	No	Not applicable,as the land is already acquired for the industrial area development.

S.No.	Information/Checklist confirmation	Yes/ No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
3.5	Any other causes	No	Not applicable

4. Production of solid wastes during construction or operation or Decommissioning(MT/month)

<table>
<tr><th>S.No.</th><th>Information/Checklist confirmation</th><th>Yes/ No</th><th colspan="4">Details thereof (with approximate quantities/rates, wherever possible) with source of information data</th></tr>
<tr><td>4.1</td><td>Soil, overburden or mine wastes</td><td>No</td><td colspan="4">Not applicable</td></tr>
<tr><td>4.2</td><td>Municipal waste (domestic and or commercial wastes)</td><td></td><td>
<table>
<tr><th rowspan="2">Waste type</th><th colspan="2">Quantity (Kg/day)</th><th rowspan="2">Management measure*</th></tr>
<tr><th>Construction phase</th><th>Operation phase</th></tr>
<tr><td>Organic waste</td><td>27</td><td>2025</td><td>Will be segregated by individual industries and sent to common MSW processing area in common amenities. Organic wastes will be composted and compost will be used for green belt development</td></tr>
<tr><td>Inorganic waste</td><td>18</td><td>1350</td><td>Will be segregated and sold to KSPCB authorized recyclers</td></tr>
<tr><td colspan="4">*Expected only after complete occupation by industries in the industrial area and only then, complete facility will be developed.
Norms - @0.45 Kg/capita/ day
Population – 100 nos. for construction phase and 7500 for operation phase</td></tr>
</table>
</td></tr>
<tr><td>4.3</td><td>Hazardous wastes (as per Hazardous Waste Management Rules)</td><td>Yes</td><td colspan="4">Individual industries after the establishment& full-fledged operation will give the details of hazardous waste generated with quantity and type while applying for EC/ CFE as applicable.</td></tr>
<tr><td>4.4</td><td>Other industrial process wastes</td><td>No</td><td colspan="4">Not applicable</td></tr>
<tr><td>4.5</td><td>Surplus product</td><td>No</td><td colspan="4">Not applicable</td></tr>
<tr><td>4.6</td><td>Sewage sludge or other sludge from effluent treatment</td><td>Yes</td><td>
<table>
<tr><th>Description</th><th>Quantity (Kg/day)</th><th>Treatment /Disposal*</th></tr>
<tr><td>CSTP sludge</td><td>100</td><td>Will be composted with organic waste and used as manure for green belt.</td></tr>
<tr><td>CETP sludge</td><td>150</td><td>Will be stored in designated area and sent to nearest TSDF site for disposal.</td></tr>
<tr><td>ATFD salt</td><td>2000</td><td>Will be stored in designated area and sent to nearest TSDF site for disposal.</td></tr>
</table>
</td></tr>
<tr><td>4.7</td><td>Construction or demolition wastes</td><td>Yes</td><td colspan="4">* Expected only after complete occupation by industries in the industrial area and only then, complete facility will be developed.</td></tr>
</table>

S.No.	Information/Checklist confirmation	Yes/ No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
			During construction phase, construction debris generated, will be segregated and whatever is re-saleable will be sold to buyers and rest of the waste will be used for filling up of low lying areas and development of internal roads and boundary walls/ will be disposed as per C&D waste rules 2016.
4.8	Redundant machinery or equipment	No	Not applicable
4.9	Contaminated soils or other materials	No	Not applicable
4.10	Agricultural wastes	No	Not applicable
4.11	Other solid wastes	No	Not applicable

5. Release of pollutants or any hazardous, toxic or noxious substances to air (Kg/hr)

S.No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
5.1	Emissions from combustion of fossil fuels from stationary or mobile sources	Yes	**Construction phase:** From operation of diesel engine driven construction equipment and movement of trucks/vehicles carrying men and materials. **Operation phase:** During operation phase, expected emissions are from the utility (DG, Boiler) stacks from individual industries, movement of trucks/vehicles carrying men and materials in the project area.
5.2	Emissions from production processes	Yes	Individual industries upon establishment will give the details of air pollution control measures proposed for process emissions while applying for EC/ CFE as applicable.
5.3	Emissions from materials handling including storage or transport	Yes	**Construction Phase: -** This will be restricted to the construction phase and construction site only. Fugitive emissions will be restricted during the mixing of aggregates, which will be minimized by water sprinklers. **Operation Phase: -** Potential fugitive emissions are expected during material handling and storage, suitable control measures such as green

S.No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
			belt development, dust suppression system will be adopted.
5.4	Emissions from construction activities including plant and equipment	Yes	The activities are temporary and is common during construction of buildings or roads. This will be taken care by sprinkling of water and barricading the construction area.
5.5	Dust or odors from handling of materials including construction materials, sewage and waste	Yes	**Construction phase: -** This will be restricted to the construction phase and to the construction site. Suitable preventive measures will be taken to prevent fugitive emissions like provision of barricades and sprinkling of water at regular intervals. Mobile STP will be provided for construction workers during construction. **Operation phase: -** Odour from CSTP and CETP are envisaged. Sewage sludge will be dried and sent for composting with organic wastes. Dust suppression system and Greenbelt will be provided to minimize the fugitive emissions during the operation phase.
5.6	Emissions from incineration of waste	No	Incineration is not proposed
5.7	Emissions from burning of waste in open air (e.g. slash materials, construction debris)	No	Open burning of wastes will be prohibited.
5.8	Emissions from any other sources	No	Not applicable.

6. Generation of Noise and Vibration, and Emissions of Light and Heat:

S.No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data with source of information data
6.1	From operation of equipment e.g. engines, ventilation plant, crushers	Yes	Noise: - **Construction Phase** – 70-85 dB (A) very near to the source such as DG set or heavy equipments, etc., - PPEs will be provided to the workers. The typical sources are: • Vehicular movement • Construction equipment • Construction activities

S.No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data with source of information data
			All major noise generating activities will be scheduled during daytime. However, the effect of the noise is mostly localand temporary i.e., will cease on completion of construction activity. **Operation Phase –** not exceeding 85 dB(A) during industrial activities and vehicular movement within the Industrial Area. **Heat** – Heat will be generated during industrial operations within the industrial premises. Proper cooling system will be used to extract/utilize the heat generated.
6.2	From industrial or similar processes	Yes	Noise generation from process will be maintained within standard limits of Factories Actby providing proper abatement measures and acoustic enclosures.
6.3	From construction or demolition	Yes	Excavation, drilling and welding will be carried out during construction phase which will be temporary in nature. Measures will be taken to ensure that noise from construction activity will be minimized by providing required measures like barricading the site. Concrete mixer, vibrators etc would be used in construction activity, however proper barricades would be provided. PPEs will be provided to workers in the working onsite.
6.4	From blasting or piling	No	No piling is proposed for construction
6.5	From construction or operational traffic	Yes	During the construction activities, utmost care will be taken to control the noise levels within the standards. While operation traffic will contribute to increase in the noise levels, this will be controlled by providing required measures.
6.6	From lighting or cooling systems	Yes	Heat is envisaged from industrial cooling systems.
6.7	From any other sources	No	Not applicable

7. Risks of contamination of land or water from releases of pollutants into the ground or into sewers, surface waters, groundwater, coastal waters or the sea:

<table>
<tr><th>S.No.</th><th>Information/Checklist confirmation</th><th>Yes/No</th><th colspan="3">Details thereof (with approximate quantities/rates, wherever possible) with source of information data</th></tr>
<tr><td>7.1</td><td>From handling, storage, use or spillage of hazardous materials</td><td>No</td><td colspan="3">Individual industries during establishment will apply &obtainfor separate CFE as applicable, wherein the details will be mentioned.
KIADB will insist on individual Industries to have proper storage and handling facility for Hazardous materials if used/generated.</td></tr>
<tr><td rowspan="3">7.2</td><td rowspan="3">From discharge of sewage or other effluents to water or the land (expected mode and place of discharge)</td><td rowspan="3"></td><td>Description</td><td>Quantity (KLD)</td><td>Treatment /Disposal*</td></tr>
<tr><td>Sewage</td><td>749</td><td>Will be treated in STP and recycled for green belt development and for flushing in residential units.</td></tr>
<tr><td>Effluent</td><td>780</td><td>Proposed1MLD CETP land reserved in industrial area</td></tr>
<tr><td>7.3</td><td>By deposition of pollutants emitted to air into the land or into water</td><td>No</td><td colspan="3">*Expected only after complete occupation by industries in the industrial area and only then, complete facility will be developed.
Air: Stack emissions, Vehicular emissions, Fugitive emissions from stack yards, and spillage at handling areas. Appropriate mitigation measures will be followed to avoid the deposition of pollutants.
Water:sewage will be treated in the proposed CETP and the treated sewage/trade effluent will be used for green belt development within the Industrial Area.
Land: Wastes and wastewater generated will not be discharged on land or water body. Proper waste management facilities are proposed for Zero Liquid Discharge Concept.</td></tr>
<tr><td>7.4</td><td>From any other sources</td><td>No</td><td colspan="3">Adequate drainage facility will be provided at the site with separate collection streams to segregate the storm water run-off, material storage areas and other wastewater streams.</td></tr>
<tr><td>7.5</td><td>Is there a risk of long term buildup of pollutants in the environment from these sources?</td><td>No</td><td colspan="3">In view of proposed pollution preventive and control measures to comply with the prescribed statutory norms, the risk of long term buildup of pollutants in the environment is not envisaged.</td></tr>
</table>

8. Risk of accidents during construction or operation of the Project, which could affect human health or the environment

S.No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
8.1	From explosions, spillages, fires etc from storage, handling, use or production of hazardous substances	Yes	Risks associated with handling, storage of hazardous materials if any for the Industrial Area will be covered in the EIA study and accordingly mitigation measures will be suggested in the EIA report. Industry specific risk assessment study shall be carried out by individual units coming up in the Industrial Area. Individual industries during establishment will apply for obtaining EC /CFE as applicable, wherein the details will be submitted.
8.2	From any other causes	No	Not applicable
8.3	Could the project be affected by natural disasters causing environmental damage (e.g.floods, earthquakes, landslides, Cloudburst etc)?	No	The project falls under seismic zone III according to Indian standard seismic zoning map. The location is not susceptible to floods, landslides or cloud bursts.

9. Factors which should be considered (such as consequential development) whichcould lead to environmental effects or the potential for cumulative impacts with other existing or planned activities in the locality

S. No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
9.1	Lead to development of supporting. Utilities, ancillary development or developmentstimulated by the project which could have impact on the environment e.g.: • Supporting infrastructure (roads, power supply, waste or waste water treatment, etc.) • housing development • extractive industries • supply industries • other	Yes	The project proposal will attract development in the surrounding areas which will have a positive impact on the environment since proper mitigation measures, will be taken while developing the Industrial Area. Supporting infrastructure –Yes Housing development – Yes Extractive industries – Yes Supply industries–Yes
9.2	Lead to after-use of the site, which could have an impact on the environment	No	The project will be in operation for long term.
9.3	Set a precedent for later developments	Yes	The proposed Industrial Area will induce development around the site.
9.4	Have cumulative effects due to proximity to other existing or planned projects with similar effects	Yes	The project site is in close proximity to existing KIADB HarohalliIndustrial Area -Phase 1, 2 & 3. Cumulative effects will be addressed in the EIA study.

(III) Environmental Sensitivity

S. No.	Areas	Name/ Identity	Aerial distance (within 15 km.)Proposed project location boundary
1	Areas protected under international conventions, national or local legislation for their ecological, landscape, cultural or other related value	Yes	Bannerghatta National Park ESZ - ~8.66 Km (SE) Bannerghatta National Park Core -~9.60 Km (SE)
2	Areas which are important or sensitive for ecological reasons - Wetlands, water courses or other water bodies, coastal zone, biospheres,	Yes	

S.No	Sensitive area	~Distance (Km)	Direction
	Water bodies		
1	Canal near Bannikuppe	0.12	W
2	Suvarnamukhi R	0.53	W
3	Arkavati R	2.08	SW
4	Vrishabhavati R	3.73	N

<table>
<tr><th>S. No.</th><th>Areas</th><th>Name/ Identity</th><th colspan="4">Aerial distance (within 15 km.)Proposed project location boundary</th></tr>
<tr><td></td><td>mountains, forests</td><td></td><td colspan="4"><table>
<tr><td>5</td><td>Bairamangala Left Bank Canal</td><td>3.81</td><td>N</td></tr>
<tr><td>6</td><td>Mavathur Kere</td><td>5.98</td><td>SSE</td></tr>
<tr><td>7</td><td>Gattal Kere Halla</td><td>6.13</td><td>E</td></tr>
<tr><td>8</td><td>Kutle Hole</td><td>7.43</td><td>SE</td></tr>
<tr><td>9</td><td>Suvarnamukhi Reservoir</td><td>8.81</td><td>NNE</td></tr>
<tr><td>10</td><td>Subedaranakerekodihalli Halla</td><td>9</td><td>ENE</td></tr>
<tr><td>11</td><td>Bairamangala Right Bank Canal</td><td>9.82</td><td>N</td></tr>
<tr><td>12</td><td>Rayatmala Hole</td><td>10.19</td><td>E</td></tr>
<tr><td>13</td><td>Antaragange Hole</td><td>12.21</td><td>E</td></tr>
<tr><td>14</td><td>Rayatmala Kere</td><td>12.78</td><td>E</td></tr>
<tr><td>15</td><td>Byramangala Reservoir</td><td>13.39</td><td>N</td></tr>
<tr><td>16</td><td>Kebre Hole</td><td>14.45</td><td>ESE</td></tr>
<tr><td colspan="4">National Park</td></tr>
<tr><td>17</td><td>Bannerghatta National Park ESZ</td><td>8.66</td><td>SE</td></tr>
<tr><td>18</td><td>Bannerghatta National Park Core/BilikalBetta RF</td><td>9.60</td><td>SE</td></tr>
<tr><td colspan="4">Reserve forests</td></tr>
<tr><td>19</td><td>Gangadharan Gudda RF</td><td>2.48</td><td>ESE</td></tr>
<tr><td>20</td><td>Handigundi RF</td><td>3.16</td><td>W</td></tr>
<tr><td>21</td><td>Bananthimari RF</td><td>4.77</td><td>SW</td></tr>
<tr><td>22</td><td>Tenginkal RF</td><td>8.49</td><td>W</td></tr>
<tr><td>23</td><td>Bannerghatta National Park ESZ</td><td>8.66</td><td>SE</td></tr>
<tr><td>24</td><td>Bilikal RF</td><td>9.45</td><td>SE</td></tr>
<tr><td>25</td><td>Bannerghatta National Park Core</td><td>9.6</td><td>SE</td></tr>
<tr><td>26</td><td>RF near Kungallu</td><td>11.45</td><td>NW</td></tr>
<tr><td>27</td><td>Bantanal RF</td><td>12.35</td><td>E</td></tr>
<tr><td>28</td><td>Karadikkala RF</td><td>13.28</td><td>NE</td></tr>
</table></td></tr>
<tr><td>3</td><td>Areas used by protected, important or sensitive species of flora or fauna for breeding, nesting, foraging, resting, over wintering, migration</td><td>Yes</td><td colspan="4">Bannerghatta National Park ESZ -8.66 Km (SE)
Bannerghatta National Park Core - 9.60 Km (SE)</td></tr>
<tr><td>4</td><td>Inland, coastal, marine or underground waters</td><td>Yes</td><td colspan="4"><table>
<tr><th>S.No</th><th>Water Bodies</th><th>~Distance (Km)</th><th>Direction</th></tr>
<tr><td>1</td><td>Pond near Project Site</td><td>Adjacent to Site</td><td>W</td></tr>
<tr><td>2</td><td>Lake near Hanumanthanagar</td><td>0.06</td><td>E</td></tr>
<tr><td>3</td><td>Canal near Bannikuppe</td><td>0.12</td><td>W</td></tr>
<tr><td>4</td><td>Suvarnamukhi R</td><td>0.53</td><td>W</td></tr>
<tr><td>5</td><td>Arkavati R</td><td>2.08</td><td>SW</td></tr>
<tr><td>6</td><td>Vrishabhavati R</td><td>3.73</td><td>N</td></tr>
<tr><td>7</td><td>Lake near Kagalhallidoddi</td><td>3.79</td><td>NNE</td></tr>
</table></td></tr>
</table>

<table>
<tr><th>S. No.</th><th>Areas</th><th>Name/ Identity</th><th>Aerial distance (within 15 km.)Proposed project location boundary</th></tr>
<tr><td></td><td></td><td></td><td>
<table>
<tr><td>8</td><td>Bairamangala Left Bank Canal</td><td>3.81</td><td>N</td></tr>
<tr><td>9</td><td>Mavathur Kere</td><td>5.98</td><td>SSE</td></tr>
<tr><td>10</td><td>Gattal Kere Halla</td><td>6.13</td><td>E</td></tr>
<tr><td>11</td><td>Kutle Hole</td><td>7.43</td><td>SE</td></tr>
<tr><td>12</td><td>Suvarnamukhi Reservoir</td><td>8.81</td><td>NNE</td></tr>
<tr><td>13</td><td>Subedaranakerekodihalli Halla</td><td>9</td><td>ENE</td></tr>
<tr><td>14</td><td>Bairamangala Right Bank Canal</td><td>9.82</td><td>N</td></tr>
<tr><td>15</td><td>Rayatmala Hole</td><td>10.19</td><td>E</td></tr>
<tr><td>16</td><td>Antaragange Hole</td><td>12.21</td><td>E</td></tr>
<tr><td>17</td><td>Rayatmala Kere</td><td>12.78</td><td>E</td></tr>
<tr><td>18</td><td>Byramangala Reservoir</td><td>13.39</td><td>N</td></tr>
<tr><td>19</td><td>Kebre Hole</td><td>14.45</td><td>ESE</td></tr>
</table>
</td></tr>
<tr><td>5</td><td>State, National boundaries</td><td>No</td><td>Nil within 15 Km radius</td></tr>
<tr><td>6</td><td>Routes or facilities used by the public for access to recreation or other tourist, pilgrim areas</td><td>Yes</td><td>➢ SH-3(Hunasanahalli-Kambadur) ~ 2.47km-SW
➢ NH-948(Bengaluru-Coimbatore) ~0.55km-NNW</td></tr>
<tr><td>7</td><td>Defense installations</td><td>No</td><td>Nil within15 km radius</td></tr>
<tr><td>8</td><td>Densely populated or built-up area</td><td>Yes</td><td>
<table>
<tr><th>S.No</th><th>Habitations</th><th>Distance (~km)</th><th>Direction</th><th>Population</th></tr>
<tr><td>1</td><td>Bannikuppe</td><td>Adjacent to Site</td><td>W</td><td>1,342</td></tr>
<tr><td>2</td><td>Hanumanahalli</td><td>0.09km</td><td>W</td><td>329</td></tr>
<tr><td>3</td><td>Yelachikatte</td><td>0.32km</td><td>N</td><td>150</td></tr>
<tr><td>4</td><td>Hanumanthanagar</td><td>0.42km</td><td>E</td><td>400</td></tr>
<tr><td>5</td><td>Kempandoddi</td><td>0.53km</td><td>WNW</td><td>120</td></tr>
</table>
</td></tr>
<tr><td>9</td><td>Areas occupied by sensitive man-made land uses (hospitals, schools, places of worship, community facilities)</td><td>Yes</td><td>
Hospitals
<table>
<tr><th>Hospitals</th><th>Dist(km)</th><th>Direc</th></tr>
<tr><td>Psduvanagere PHC</td><td>3.47</td><td>E</td></tr>
<tr><td>Chikkamuduvadi PHC</td><td>4.13</td><td>W</td></tr>
<tr><td>Kanakapura Government Hospital</td><td>6.65</td><td>S</td></tr>
<tr><td>Gollahalli PHC</td><td>7.79</td><td>NNW</td></tr>
<tr><td>Harohalli CHC</td><td>8.35</td><td>NE</td></tr>
<tr><td>SRS Betta Government PHC</td><td>9.06</td><td>W</td></tr>
<tr><td>Doddamaralavadi PHC</td><td>10.2</td><td>E</td></tr>
<tr><td>Manchegowdana Palya Govt PHC</td><td>11.29</td><td>NNW</td></tr>
<tr><td>Nanjapura Government PHC</td><td>13.11</td><td>W</td></tr>
<tr><td>Thoredoddi PHC</td><td>14.23</td><td>N</td></tr>
</table>
Public Buildings
<table>
<tr><th>Government Buildings</th><th>Dist(km)</th><th>Direc</th></tr>
<tr><td>T.Hosahalli Post Office(BO)</td><td>3.75</td><td>ENE</td></tr>
</table>
</td></tr>
</table>

S. No.	Areas	Name/ Identity	Aerial distance (within 15 km.)Proposed project location boundary

Kanakapura Fire Station	4.74	S
Kanakapura Sub Register Office	6.87	S
Kanakapura taluk office	7.45	S
Harohalli Town Panchayat Office	7.57	NE
Harohalli Police Station	7.65	NE
Avverahalli Post Office	8.57	WNW
Kolliganahalli Village Panchayat Office	9.09	N
Kailancha Branch Post Office	10.23	WNW
Kanchugarahalli Grama Panchayat	10.73	NNE
Banavasi Panchayat Office	13.12	E
Byramangala Panchayat Office	13.34	N

Religious Places

Religious places	Dist(km)	Direc
Sri Chamundeshwari Temple	0.13	W
Ankanatheshwar Temple	0.44	W
Jamia Masjid	1.46	NW
Sri Lakshmi Narasimhaswamy Temple	1.77	NE
Basappa Temple	2.51	N
Basaveshwara Temple	6.6	N
Sri Nirvaneshwar Temple	6.88	S
Banantamaramma Temple	7.01	S
Sri Basaveshwara Swami Temple	7.19	E
St. Rita's Church	7.53	S
Sri Arunachaleshwara Swamy	7.69	NE
Sri Kolapuradhama Temple	8.52	ENE
Sri Renukamba Temple	9.28	W
Muneshwaraswamy Temple	9.66	NNW
Masjid-e-Husna	9.9	NNE
Sri Veerabhadra Swamy Temple	11.14	S
Kaggalahalli Anjaneya Temple	12.98	NNE
Thripuraamba Chamundeshwari Temple	14.72	NNE

Schools

Schools	Dist(km)	Direc
Rampura Govt School	1.31	SSW
Thungani Government High School	2.47	SSE
Chikkakalabalu Govt. High School	2.98	NNW
T.Hosahalli Government High school	2.98	ESE
Kurubarahalli Govt School	4.77	N
T Bannikuppe Govt High School	4.9	N
Kadasikopppa Govt high school	7.31	N
Kanakapura Government Girls High School	7.32	S
Harohalli Govt High School	7.69	NE
Thokasandra Govt School	8.12	ESE

S. No.	Areas	Name/ Identity	Aerial distance (within 15 km.)Proposed project location boundary

Thumbenahalli Govt High School	12.05	NW
Kurubarahalli Government School	12.16	SW
KaaduJakkasandra Govt Primary School	12.51	NE
Byramangala Govt School	13.24	N

Colleges

Colleges	Dist (km)	Direc
Jain University	1.91	ENE
Dr. Chandramma Dayanada Sagar Institute of Medical Education & Research	4.12	NE
Kanakpura Govt ITI College	4.57	S
Kanakapura Government First Grade College	5.99	S
Sri Nirvanaswamy College of Nursing	6.54	S
Kanakapura Rural College	7.41	S
Harohalli Govt ITI College	7.98	NE
Harohalli Govt First Grade College	8.01	NE
Aditya's PU College	8.14	S
Amruta Institutions	14.49	N
K R Institutons	14.59	NNE

Industries

Industries	Dist(km)	Direc
Solar power plant near Gopasandra	0.89	S
Saj Food Products Pvt Ltd	4.5	NNE
Origin Mouldings Pvt Ltd	4.62	NNE
Innova Printing and Packaging Company Pvt Ltd	4.72	NNE
Dairy Classic Icecreams Pvt Ltd	4.78	NNE
Anthem BioSciences Pvt Ltd Unit - II	4.89	NNE
SBEE Cables India Ltd Unit II	4.99	NNE
Arma Engineering	5.01	NNE
Stanzen Engineering Pvt Ltd	5.1	NNE
Micro Plastics Pvt Ltd	5.15	NNE
Parsons Nutritionals Pvt Ltd	5.16	NNE
Bhaskar Book Tech	5.19	NNE
Mahesh Engineering Works	5.22	NE
Rapsri Engineering Products Company Ltd	5.28	NNE
Micro Plastics Pvt Ltd Unit - III	5.35	NNE
Orchid Laminates Pvt Ltd unit - II	5.42	NNE
Metcraft Engineering	5.43	NNE
Horizon packs Pvt Ltd	5.53	NNE
Trishul Winding Solutions Pvt Ltd	5.54	NNE
Armes Maini Storage Systems Pvt Ltd	5.57	NNE
Pagariya Food Products Pvt Ltd	5.57	NNE
Micro Plastics Pvt Ltd Unit - IV	5.6	NNE
A. O. Smith India Water Products Pvt Ltd	5.61	NNE

S. No.	Areas	Name/ Identity	Aerial distance (within 15 km.)Proposed project location boundary		
			Orchid Laminates Pvt Ltd	5.72	NNE
			Tokai Rubber Auto Parts India Pvt Ltd	5.81	NNE
			Big Drum India Pvt Ltd	5.81	NNE
			ANS Ppaper Mills Pvt Ltd Unit - II	5.81	N
			Adarsha Packaging Pvt Ltd	5.82	NNE
			DPK Engineers Pvt Ltd	5.84	NNE
			Veer O Metals Pvt Ltd	5.94	NNE
			Vashkleen Laundry Services Pvt Ltd	5.96	NNE
			Signode India Ltd	5.98	NNE
			Naveen Granites	6.05	NNE
			Ramesh Enterprises	6.12	NNE
			Sonia Organics Unit-ll	6.16	NNE
			Saify Ind Plant - V	6.42	NNE
			Sakthi Accumulators Pvt Ltd Unit - II	6.44	NNE
			Varroc TCPL	6.61	NNE
			Vishnupriya Industries Pvt Ltd	6.66	NNE
			Basant Betons Unit II	6.77	NNE
			Ram Enterprises	6.85	NNE
			InnoDI Water Technologies Pvt Ltd	6.87	NNE
			Leo Metal Craft Pvt Ltd	7.09	NNE
			Krishna Foams Pvt Ltd	7.17	NNE
			Vasudha Colours Pvt Ltd Unit II	7.19	NNE
			Stovekraft Ltd	7.2	NNE
			Saint Gobain India Pvt Ltd	7.33	NNE
			ForgePro India Pvt Ltd	7.42	NNE
			Bharat Wire Strips	7.76	NNE
			Bengaluru cooperative Milk Union Ltd	11.36	S
			Laguna Clothing LLP	12.15	SSW
10	Areas containing important, high quality or scarce resources (ground water resources, surface resources, forestry, agriculture, fisheries, tourism, minerals)	Yes	**S.No**	**Sensitive area**	**~Distance (Km)**	**Direction**
			Water bodies			
			1	Canal near Bannikuppe	0.12	W
			2	Suvarnamukhi R	0.53	W
			3	Arkavati R	2.08	SW
			4	Vrishabhavati R	3.73	N
			5	Bairamangala Left Bank Canal	3.81	N
			6	Mavathur Kere	5.98	SSE
			7	Gattal Kere Halla	6.13	E
			8	Kutle Hole	7.43	SE
			9	Suvarnamukhi Reservoir	8.81	NNE
			10	Subedaranakerekodihalli Halla	9	ENE
			11	Bairamangala Right Bank Canal	9.82	N
			12	Rayatmala Hole	10.19	E
			13	Antaragange Hole	12.21	E
			14	Rayatmala Kere	12.78	E

S. No.	Areas	Name/ Identity	Aerial distance (within 15 km.)Proposed project location boundary			
			15	Byramangala Reservoir	13.39	N
			16	Kebre Hole	14.45	ESE
			National Park			
			17	Bannerghatta National Park ESZ	8.66	SE
			18	Bannerghatta National Park Core/BilikalBetta RF	9.60	SE
			Reserve forests			
			19	Gangadharan Gudda RF	2.48	ESE
			20	Handigundi RF	3.16	W
			21	Bananthimari RF	4.77	SW
			22	Tenginkal RF	8.49	W
			23	Bannerghatta National Park ESZ	8.66	SE
			24	Bilikal RF	9.45	SE
			25	Bannerghatta National Park Core	9.6	SE
			26	RF near Kungallu	11.45	NW
			27	Bantanal RF	12.35	E
			28	Karadikkala RF	13.28	NE
11	Areas already subjected to pollution or environmental damage. (those where existing legal environmental standards are exceeded)	No	Nil within 15 Km radius			
12	Areas susceptible to natural hazard which could cause the project to present environmental problems (earthquakes, subsidence, landslides, erosion, flooding or extreme or adverse climatic conditions)	No	The area under study falls in Zone-III according to the Indian Standard Seismic Zoning Map thus the chances of Earthquake are not much here. The location is not susceptible to floods, landslides or cloud bursts.			

(IV) **Proposed Terms of Reference for EIA studies**

As per the SOP of Violation projects given by statutory authorities and Standard TOR issued by MoEFCC.

(V) Declaration

I hereby given undertaking that the data and information given in the application and enclosure are true to the best of my knowledge and belief and I am aware that if any part of the data and information submitted is found to be false or misleading at any stage, the project will be rejected and clearance give, if any to the project will be revoked at our risk and cost.

Date: 05.08.2022

Place: Bangalore

Signature of the applicant

With Name and Full Address

(Projectproponent/AuthorizedSignatory)

Executive Engineer-1
KIADB, # 14/3, 2nd Floor,
CES Building, Maharshi Aravinda Bhavan,
[illegible] 560001.