State Environment Impact Assessment Authority, Haryana
Bays No.55-58, Prayatan Bhawan, Sector-2 Panchkula.

Telephone No. 0172-2565232, 4043956
Email Id:- seiaa-21.env@hry.gov.in

Memo No. SEIAA/HR/2025/ 129 **Date:** 28/11/2025

To

The Registrar,
National Green Tribunal,
New Delhi.

Subject: **Scanned copy of the Original record in Appeal No. 48 of 2025 titled as Rajesh Sharma Vs MoEF&CC and Ors.**

Respected Sir/Madam,

As per the Directions dated 15.07.2025 of Hon'ble National Green Tribunal in Appeal No. 48 of 2025 title as Rajesh Sharma versus MoEF&CC and Ors, kindly find enclosed herewith scanned copy of the Original Record on **behalf of Respondent No. 03** for leading to grant Environment Clearance letter dated 19.02.2025 in favour of Respondent No. 6 & 7.

Therefore, you are hereby requested to place the same in the records.

Establishment Branch
for Member Secretary,
SEIAA, Haryana

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AN ISO 9001:2015; 14001:2015; 45001:2018; 27001:2022 CERTIFIED COMPANY

Dr. Virender Kumar Dahiya, IAS
Member Secretary
SEIAA Haryana

Dated: 28.01.2025

To,

The Member Secretary,

State Environment Impact Assessment Authority (SEIAA),

Bays No. 55-58, Sector 2,

Panchkula, Haryana

Sub: Regarding Environment Clearance for Industry Plotted Colony Project at Village- Shidrawali, Tehsil Manesar, District- Gurugram, Haryana by M/s Signatureglobal India Limited

Ref: 195th SEIAA Haryana meeting dated 28.01.2025 (S.no. 195.06)

Dear Sir,

This is in reference of the above mentioned subject; we are herewith submitting the reply to the observation raised during 195th SEIAA, Haryana meeting dated 28.01.2025 for your kind perusal.

Hope this will meet your satisfaction.

Thanking you.

Yours sincerely,

For M/s Signatureglobal India Limited

Signature Global India Limited

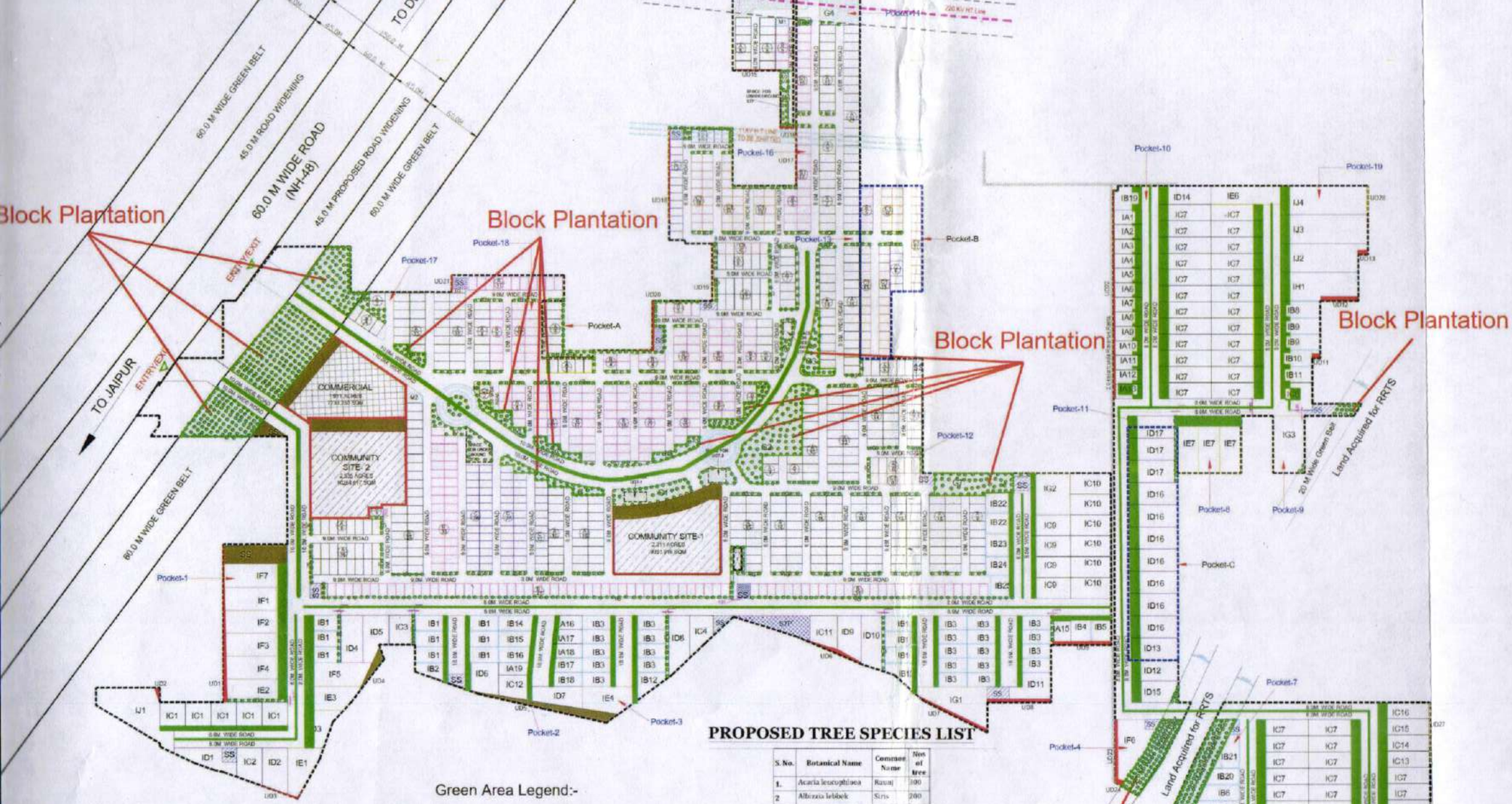
Name: Vineet Kumar

Designation: Authorized Signatory

Reply to the observations raised during 195th SEIAA Haryana Meeting held on 28.01.2025 w.r.t. Industry Plotted Colony Project at Village- Shidrawali, Tehsil Manesar, District- Gurugram, Haryana by M/s Signatureglobal India Limited

S. No.	Queries	Reply
1	Provide Revised Landscape with 8% block plantation	The Revised Landscape Plan is enclosed as **Annexure-I.** Total Licensed Area = 5,49,258.716 m^2 Net Area = 5,32,029.859 m^2 Net Planned Area = 5,26,513.219 m^2 Proposed no. of trees = 6581 Block Plantation area = 5% of Net planned area = 26,325.6 m^2 Additional Block Plantation = 3% of Net planned area = 15,795.45 m^2 Total block plantation = 8% of Net planned area = 42,121.05 m^2 Lawn area & avenue plantation area = 12% of Net planned area = 63,181.59 m^2 Total Green Area = 20% of net planned area = 1,05,302.64 m^2
2.	Provide Environment Management Plan (EMP)	The Revised EMP is enclosed as **Annexure-II.**
3.	Provide Electrical load breakup	The Electrical load breakup sheet is enclosed as **Annexure-III.**
4.	Provide OWCs 5 nos with capacity details	As advised, we will provide 5 nos of OWCs. The calculations are enclosed as **Annexure-IV.**

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PROPOSED TREE SPECIES LIST

S.No.	Botanical Name	Common Name	Nos of tree
1.	Acacia leucophloea	Raunj	300
2	Albizzia lebbek	Siris	200
3	Azadirachta indica	Neem	300
4	Anogeissus pendula	Dhauk	200
5	Bombax ceiba	Semal	400
6	Boswelli aserrata	Salai	200
7.	Butea monosperma	Dhak	200
8.	Cassia fistula	Amaltas	300
9.	Cordia dichotoma	Lasura	300
10.	Dalbergia sisoo	Shisham	300
11.	Holoptelia integrifolia	Papri	300
12.	Kigelia pinnata	Kigelia	500
13.	Melia azedarach	Bakain	500
14.	Pongamia pinnata	Papri, Karanj	300
15.	Prosopis cineraria	Jand, Jandi	300
16.	Salvadora oleoides	Jal	400
17.	Terminalia arjuna	Arjun	400
18.	Bauhinia variegata	Kachnar	400
19.	Ficus religiosa	Peepal	300
20.	Ficus benghalensis	Bad	200

Green Area Legend:-

- Block Plantation (5%)
- Additional Block Plantation (3%)
- Lawn area & Avenue Plantation (12%)

EN AREA DETAILS:-

Licensed area = 5,49,258.716 SQM.
rea = 5,32,029.859 SQM.
anned area = 5,26,513.219 SQM.
sed no of trees = 6581

Plot legend:-

Legend:-

- LICENSE APPLIED AREA = 129.65625Acres
- ADDITIONAL LAND AREA = 6.04875 Acres (Pocket A to C)
- SPACE FOR SUB STATION
- REVENUE RASTA
- GREEN AREA
- COMMERCIAL

- TYPE-A - 9.0x16.65 M
- TYPE-B - 9.0x13.90 M
- TYPE-B1 - 9.0x14.50 M

Signature Global India Limited

OWNER :

SUNGOLD HEIGHTS DEVELOPERS LLP
COLLABRATION WITH SIGNATUREGL
(INDIA) LIMITED

PROJECT :

PROPOSED LAYOUT PLAN FOR ADDITIO
MEASURING 6.06875 ACRES ADJOININ
LICENSED AREA OF 129.65625 ACRES V
LICENSE NO. OF DATED , TOT
135.7250 ACRES IN VILLAGE SHIDRAW
MANESAR, DISTRICT GURUGRAM. BEING
BY SIGNATUREGLOBAL (INDIA) LTD.

DRAWING TITLE :

LAYOUT PLAN

268

Annexure-II

EMP BUDGET

The cost of the project is proposed to be INR 1593.76 Crores. The capital cost for environmental management of the proposed project is estimated to be INR 797 lakhs. INR 189.5 lakhs per year will be required as annual recurring expenses to meet the recurring expenditure for implementing the measures.

DURING CONSTRUCTION PHASE		
COMPONENT	**CAPITAL COST (INR LAKH)**	**RECURRING COST (INR LAKH/YR)**
Labor Sanitation & Wastewater Management	15	3.75
Dust Mitigation Measures Including site barricading, water sprinkling and anti-smog gun)	15	3.75
Storm Water Management (temporary drains and sedimentation basin)	10	2.5
Solid Waste Management	5	1.25
Sub-Total	**45**	**11.25**

DURING OPERATION PHASE		
COMPONENT	**CAPITAL COST (INR LAKH)**	**RECURRING COST (INR LAKH/YR)**
Sewage Treatment Plant	320	80
Rainwater Harvesting System	140	35
Solid Waste Management	105	26.25
Environmental Monitoring	0	9
Green Area/ Landscape Area	102	25.5
Sub-Total	**667**	**175.75**

BUDGET OUSTSIDE THE PROJECT SITE CER	
COMPONENT	**CAPITAL COST (INR LAKH)**



Govt. Sr. Sec. School, Sidhrawali • Complete makeover • Construction of toilets • Installation of Solar Panels • Painting of School Building • Replacement of doors and windows • Energy efficient lighting • Smart Classroom equipment	60
Aravali Safari and Aravali Green Wall Funds	25
Sub-Total	**85**

TOTAL EMP BUDGET		
COMPONENT	**CAPITAL COST (INR LAKH)**	**RECURRING COST (INR LAKH/YR)**
During Construction Phase	45	11.25
During Operation Phase	667	175.75
Budget for the nearby Government School for improvement of infrastructure along with Aravali Safari and Aravali Green Wall	55	--
TOTAL	**797**	**187**

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Signature Global India Limited

INDUSTRIAL PARK MEASURING 132.9875 ACRES AT VILLAGE- SHIDRAWALI, GURUGRAM, HARYANA									
SUBHEAD: ESTIMATION OF ELECTRICAL LOAD AS PER DHBVN NORMS									
S.NO.	PLOT TYPE	AREA (SQ.FT.)	AREA (SQ.M.)	AREA (MARLA)	NO. OF PLOTS	LOAD (KW)	TOTAL LOAD (KW)	D.F.	DEMAND LOAD (KW)
A)	RESIDDENTIAL PLOTS (FOR A-CLASS CITY)								
1	TYPE-A	1612.39	149.85	5.92	231	11.92	**2754.20**	0.4	**1101.68**
2	TYPE-B	1346.08	125.10	4.94	317	10.94	**3469.46**	0.4	**1387.78**
3	TYPE-C	1162.08	108.00	4.27	180	10.27	**1848.38**	0.4	**739.35**
4	TYPE-C1	1113.66	103.50	4.09	109	10.09	**1099.91**	0.4	**439.96**
TOTAL FOR RESIDDENTIAL PLOTS 'A'					**837**		**9171.94**		**3668.78**
B)	INDUSTRIAL PLOTS								
1	IA (250-500SQM)								
i.	IA1	4842.00	450	17.79	14	40.01	**560.18**	0.625	**350.11**
2	IB (501-750SQM)								
i.	IB1	6276.66	583.333	23.06	15	42.87	**642.99**	0.625	**401.87**
ii.	IB2	5937.94	551.853	21.81	1	42.19	**42.19**	0.625	**26.37**
iii.	IB3	5648.96	524.996	20.75	28	41.61	**1165.18**	0.625	**728.24**
iv.	IB4	6700.10	622.686	24.61	7	43.71	**305.98**	0.625	**191.24**
v.	IB5	7115.78	661.318	26.14	3	44.54	**133.62**	0.625	**83.51**
vi.	IB6	5434.89	505.101	19.96	1	41.19	**41.19**	0.625	**25.74**
vii.	IB7	7032.90	653.615	25.83	1	44.38	**44.38**	0.625	**27.73**
viii.	IB8	7986.38	742.229	29.34	1	46.28	**46.28**	0.625	**28.92**
ix.	IB9	7670.20	712.844	28.18	2	45.65	**91.29**	0.625	**57.06**
x.	IB10	6917.07	642.850	25.41	1	44.14	**44.14**	0.625	**27.59**
xi.	IB11	6136.97	570.350	22.54	1	42.59	**42.59**	0.625	**26.62**
3	IC (751-1000SQM)								
i.	IC1	8658.14	804.660	31.80	5	47.62	**238.09**	0.625	**148.81**
ii.	IC2	9085.29	844.358	33.37	1	48.47	**48.47**	0.625	**30.29**
iii.	IC3	8254.46	767.143	30.32	1	46.81	**46.81**	0.625	**29.26**
iv.	IC4	9551.64	887.699	35.09	1	49.40	**49.40**	0.625	**30.88**
v.	IC5	9336.43	867.698	34.30	1	48.97	**48.97**	0.625	**30.61**
vi.	IC6	10060.60	935.000	36.96	58	52.01	**3016.38**	0.625	**1885.24**
vii.	IC7	9383.82	872.102	34.47	1	49.07	**49.07**	0.625	**30.67**
viii.	IC8	8607.02	799.909	31.62	1	47.52	**47.52**	0.625	**29.70**
ix.	IC9	10042.76	933.342	36.89	1	51.84	**51.84**	0.625	**32.40**
x.	IC10	10732.17	997.414	39.42	1	58.46	**58.46**	0.625	**36.54**
xi.	IC11	8720.78	810.481	32.03	1	47.74	**47.74**	0.625	**29.84**
xii.	IC12	9566.80	889.108	35.14	1	49.43	**49.43**	0.625	**30.89**
4	ID (1001-1250SQM)								
i.	ID1	10791.84	1002.959	39.64	1	49.04	**49.04**	0.625	**30.65**
ii.	ID2	13371.89	1242.741	49.12	1	64.39	**64.39**	0.625	**40.24**
iii.	ID3	11443.92	1063.561	42.04	1	60.98	**60.98**	0.625	**38.11**
iv.	ID4	12628.99	1173.698	46.39	1	63.07	**63.07**	0.625	**39.42**
v.	ID5	11993.92	1114.677	44.06	1	61.95	**61.95**	0.625	**38.72**
vi.	ID6	12380.12	1150.569	45.48	1	62.63	**62.63**	0.625	**39.15**
vii.	ID7	12766.69	1186.495	46.90	1	63.32	**63.32**	0.625	**39.57**
viii.	ID8	11945.82	1110.206	43.88	2	61.87	**123.73**	0.625	**77.33**
ix.	ID9	11456.23	1064.705	42.08	1	61.00	**61.00**	0.625	**38.12**
x.	ID10	12749.31	1184.880	46.83	1	63.29	**63.29**	0.625	**39.55**
xi.	ID11	12710.29	1181.254	46.69	1	63.22	**63.22**	0.625	**39.51**
5	IE (1251-1500SQM)								
i.	IE1	13788.21	1281.432	50.65	1	65.13	**65.13**	0.625	**40.70**
ii.	IE2	15124.17	1405.592	55.56	1	67.49	**67.49**	0.625	**42.18**
iii.	IE3	14359.16	1334.494	52.75	1	66.14	**66.14**	0.625	**41.34**
iv.	IE4	13697.22	1272.976	50.32	1	64.97	**64.97**	0.625	**40.60**
v.	IE5	14472.20	1345.000	53.16	1	66.34	**66.34**	0.625	**41.46**
vi.	IE6	15727.58	1461.671	57.77	1	68.56	**68.56**	0.625	**42.85**
vii.	IE7	15204.83	1413.088	55.85	1	67.63	**67.63**	0.625	**42.27**
viii.	IE8	15941.88	1481.587	58.56	1	68.94	**68.94**	0.625	**43.09**
ix.	IE9	13458.33	1250.774	49.44	1	64.54	**64.54**	0.625	**40.34**
x.	IE10	15239.56	1416.316	55.98	1	67.70	**67.70**	0.625	**42.31**

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S.NO.	PLOT TYPE	AREA (SQ.FT.)	AREA (SQ.M.)	AREA (MARLA)	NO. OF PLOTS	LOAD (KW)	TOTAL LOAD (KW)	D.F.	DEMAND LOAD (KW)
6	IF (1500-1750SQM)								
i.	IF1	17417.55	1618.731	63.98	6	71.55	429.30	0.625	268.31
ii.	IF2	16987.37	1578.752	62.40	1	70.79	70.79	0.625	44.24
iii.	IF3	18183.87	1689.951	66.80	1	72.91	72.91	0.625	45.57
iv.	IF4	16673.15	1549.549	61.25	1	70.23	70.23	0.625	43.90
v.	IF5	17993.24	1672.234	66.10	1	72.57	72.57	0.625	45.36
7	IG (1750-2000SQM)								
i.	IG	20911.86	1943.481	76.82	1	78.88	78.88	0.625	49.30
8	IH (2000-2500SQM)								
i.	IH1	23795.55	2211.482	87.41	1	86.11	86.11	0.625	53.82
ii.	IH2	23805.75	2212.430	87.45	1	86.14	86.14	0.625	53.84
iii.	IH3	25379.35	2358.676	93.23	1	90.09	90.09	0.625	56.30
iv.	IH4	21772.09	2023.428	79.98	3	81.04	243.11	0.625	151.94
v.	IH5	26677.77	2479.347	98.00	1	93.35	93.35	0.625	58.34
vi.	IH6	21542.47	2002.088	79.13	1	80.46	80.46	0.625	50.29
9	IJ (2501-3000SQM)								
i.	IJ1	32532.75	3023.490	119.51	1	122.48	122.48	0.625	76.55
ii.	IJ2	29531.71	2744.583	108.48	1	101.42	101.42	0.625	63.39
iii.	IJ3	27947.77	2597.376	102.66	1	96.53	96.53	0.625	60.33
iv.	IJ4	29943.56	2782.859	109.99	2	104.31	208.62	0.625	130.39
TOTAL FOR INDUSTRIAL PLOTS 'B'					194		10319.23		6449.52
C)	COMMERCIAL PLOTS								
1	COMMERCIAL-1 (11KW/100SQ MTR.) @ 1.5 FAR RATIO OF 7457.16 SQM.		11185.74		1	1230.43	1230.43	0.5	615.22
2	COMMERCIAL-2 (11KW/100SQ MTR.) @ 1.5 FAR RATIO OF 18914.06 SQM		28371.09		1	3120.82	3120.82	0.5	1560.41
TOTAL FOR COMMERCIAL PLOTS 'C'					2		4351.25		2175.63
D)	COMMUNITY PLOTS								
1	COMMUNITY -1 (DISPESARY) (5KW/100SQ MTR.) @ 1.5 FAR RATIO OF 6086.744 SQM.		9130.116		1	456.51	456.51	0.5	228.25
2	COMMUNITY-2 (CLUB) (2.5KW/100SQM.) @ 1 FAR RATIO		8876.35		1	221.91	221.91	0.5	110.95
3	HIGH SCHOOL (0.5KW/100SQ MTR.) @ 1.5 FAR RATIO OF 8102.049 SQM.		12153.0735		1	60.77	60.77	0.5	30.38
TOTAL FOR COMMUNITY PLOTS 'D'					3		739.18		369.59
E)	COMMON AREAS								
1	PLUMBING LOAD (STP+WTP+FIRE FIGHTING & JOCKEY)						700.00	0.5	350.00
2	EXTERNAL LIGHTING						50.00	0.5	25.00
3	MISC. LOAD						800.00	0.5	400.00
TOTAL FOR 'E'							1550.00		775.00
TOTAL (A+B+C+D+E)					837		26131.6	KW	12883



Annexure-IV

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Date: 28.01.2025

UNDERTAKING

I, Vineet Kumar (Authorized Signatory), S/o Shri Pop Singh of M/s Signatureglobal India Limited having its registered office at 13th floor, Dr. Gopal Das Bhawan,28 Barakhamba Road, Place, New Delhi-110001 do hereby solemnly affirm, declare & undertake as given below:

1. That we are going to construct an Industry Plotted Colony Project over an area measuring 135.7250 acres in the revenue estate of Village- Shidrawali, Tehsil Manesar, District- Gurugram, Haryana

2. That, we have proposed 5 Nos of OWC, each with a capacity of 2000 kg.

For M/s Signatureglobal India Limited

Name: Vineet Kumar

Designation: Authorized Signatory

-9-

(2)

307.14

Reply

SIGNATURE GLOBAL
REALTY. RELIABILITY. RESPONSIBILITY.
AN ISO 9001:2015; 14001:2015; 45001:2018; 27001:2022 CERTIFIED COMPANY

To,
The Chairman
State Expert Appraisal Committee (SEAC),
Bays No. 55-58, Sector -2
Panchkula, Haryana

Date: 20.12.2024

Sub: Regarding Environmental Clearance for Industrial Plotted Colony Project located at Village- Shidrawali, Tehsil Manesar, District- Gurugram, Haryana by M/s Signatureglobal India Limited

Ref: 307th SEAC meeting scheduled on 20.12.2024 (S. No. 307.14)

Dear Sir,

This is in reference to above mentioned project we are herewith submitting the point wise reply to the observations raised during the 307th SEAC Haryana meeting held on 20.12.2024.

Hope the reply meets your satisfaction.

Kindly grant us the environmental clearance at your earliest.

Thanking you,

Yours truly,

For, M/s Signatureglobal India Limited

Name: Vineet Kumar
Designation: Authorized Signatory

Reply to the observations raised during 307th SEAC Haryana Meeting dated 20.12.2024 w.r.t. Industrial Plotted Colony Project located at Village- Shidrawali, Tehsil Manesar, District- Gurugram, Haryana by M/s Signatureglobal India Limited

S. No.	Queries	Reply
1	Complete Background/Introduction note of the project	The Complete background of the project is enclosed as **Annexure-I.**
2.	Details of all assurances	❖ Construction Phase water NOC is enclosed as **Annexure-II (a).** ❖ Fresh water supply NOC is enclosed as **Annexure-II (b).** ❖ Sewerage NOC is enclosed as **Annexure-II (c).** ❖ Power NOC is enclosed as **Annexure-II (d).** ❖ Aravalli NOC is enclosed as **Annexure-II (e).** ❖ Forest NOC is enclosed as **Annexure-II (f).**
3.	Building Plan Status	Project is in concept. Also, we are not going to construct any plots. The building approval plan will be individually taken by the individual plot owners.
4.	Status of LOI/License	License for 129.65625 acres and LOI for 6.06875 acres has been granted to the proposed project. Copy of the same are enclosed as **Annexure-III**
5.	Status of Zoning	Zoning was approved by DGTCP to M/s Signatureglobal India Limited. vide DRG no. 10499 dated 19.09.2024. Copy of the same is enclosed as **Annexure-IV.**
6.	Clarify Area added due to widening of Road	The Notification dated 03.06.2020 from Town and Country Planning Department and Urban Local Bodies department states that- ***"Benefit of tradable Floor Area Ratio may be allowed against licenses granted for the land falling under sector road or green belt and open space zones in accordance with specified policies".*** Copy of Notification is enclosed as **Annexure-V.**
7.	Fresh Form I and Form IA along with Conceptual Plan	Revise Form I and Form IA along with Conceptual Plan are enclosed as **Annexure-VI (a).** EIA report is attached as **Annexure-VI(b).**
8.	Status of water Assurance	Fresh water supply NOC is enclosed as **Annexure-II (b).** If services are not available at the time of operation than we will obtain permission from HWRA and copy of affidavit regarding the same is Attached as **Annexure-VII.**

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9.	Sewage assurance	Permission for sewer connection has been obtained from Executive Engineer, HSVP, Division no. VI Gurugram vide Memo No 317251 dated 26.11.2024. Copy of the same is enclosed as **Annexure-II (c)**.
10.	List of types of units to be established	The types of units include: ❖ General industries, ❖ Apparel and Footwear industries, ❖ Biotechnology industries other than Pharmaceuticals, ❖ Information Technology and enabled services industries, ❖ Information Technology Park, Cyber Park, Cyber city, Technology Park ❖ Data Centre Industries Zoning plan showing details of industries is enclosed as **Annexure-IV.**
11.	Mention area of Green and Block Plantation separately with percentage	The Landscape plan showing the green area and Block Plantation is enclosed as **Annexure-VIII.**
12.	Propose amount of Rs.25 lakh each for Aravali Safari and Aravali Green Wall Funds & Add Rs.50 Lakh for school in EMP	Revise EMP is enclosed as **Annexure-IX.**
13.	Atleast 02 or 03 OWCs shall installed for disposal of organic waste	We will install 3 OWCs as suggested. The Affidavit stating the same is enclosed as **Annexure- VII.**
14.	Fire NOC	Fire NOC is in progress.
15.	CA Certificate	CA certificate is enclosed as **Annexure-X.**
16.	AAI NOC	As this is plotted development, AAI NOC is not applicable.
17.	Electrification Plan	Electrification Plan and Power NOC are enclosed as **Annexure-XI & Annexure- II (d)**
18.	Ground Water Quality	The Test reports showing Ground water quality is enclosed as **Annexure-XII.**
19.	Percolation Data	The RWH details are enclosed with **Annexure-XIII.**
20.	Affidavit about litigation, distance WLS/NBS, HT Line, Revenue Rasta, construction status, existing trees	The Affidavit stating about litigation, distance WLS/NBS, HT Line, Revenue Rasta, construction status, existing trees is enclosed as **Annexure- VII.**





ANNEXURE-I

The brief history of the case is as under:

1. The land was licensed in the name of M/s Signatureglobal India Limited for setting up of Industrial Plotted Colony Project an area measuring 129.65625 acres in the revenue estate of Village-Shidrawali, Tehsil Manesar, Gurugram, Haryana, vide Licence No. 104 dated: 01.08.2024 and
2. Later additional LOI has been obtained from Town and Country Planning Department in the name of the name M/s Signatureglobal India Limited for setting up of Industrial Plotted Colony Project an area measuring 6.06875 acres in the revenue estate of Village-Shidrawali, Tehsil Manesar, Gurugram, Haryana vide Memo no. LC-5139-B-DS(AK)/2024/38456 dated 06.12.2024
3. The cost of the project is INR 1593.7 Crores.
4. Zoning was approved by DGTCP to M/s Signatureglobal India Limited. vide DRG no. 10499 dated 19.09.2024.
5. Forest NOC letter no. HUQ-DTC-CHXW dated 29.02.2024 has been received to clarify the applicability of Forest NOC.
6. Aravalli NOC has been obtained from vide Sl. no. 74/M.B dated 30.05.2024 in the name of M/s Signatureglobal India Limited.
7. Water assurance has been obtained vide Memo no. 317249 has been issued for providing drinking water during construction and operation phase from Executive Engineer, HSVP, Division no. VI Gurugram dated 26.11.2024.
8. Permission for sewer connection has been obtained from Executive Engineer, HSVP, Division no. VI Gurugram vide Memo No 317251 dated 26.11.2024.
9. Power assurance has been obtained form DHBVN vide memo no. Ch.28/Drg.-PLC dated 06.09.2024.

Signatureglobal (India) Ltd

Signatureglobal (India) Limited

Annexure-II(a)

GMDA

OFFICE OF THE EXECUTIVE ENGINEER-V, SEW. DIVISION, GMDA, GURUGRAM
Address : 6th Floor, Plot No. 3, Sector-44, Gurugram,
E-mail -xen4infra2.gmda@gov.in

To,

M/s Signature Global Business Park Pvt. Ltd.,
Ground Floor, Tower -A, Signature Tower,
South City -I, Gurugram, Haryana – 122001
Email – compliance@signatureglobal.in

Memo No. GMDA/SEW/2024/417 Dated. 02-09-2024

Sub: - **Assurance for supply of 1450 KLD STP treated water for construction purpose of the proposed Industrial Plotted Colony over an area measuring 129.65625 acres (License No. 104 of 2024 dated 01.08.2024 valid upto 31.07.2029) falling in the revenue estate of village – Sidhrawali, Tehsil – Manesar, District - Gurugram being developed M/s Signature Global Business Park Pvt. Ltd.**

Ref: - **Your office latter dated 24.08.2024.**

With reference to the above cited subject, it is intimated that 1450 KLD tertiary treated water is available at CETP Manesar Gurugram. The tertiary treated water can be purchased from STP with your own transportation arrangement through online module of GMDA available at www.gmda.gov.in.

Executive Engineer-V,
Sew. Division, GMDA
Gurugram.

Signatureglobal (India) Ltd

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D. Branch / Pawan, Office Asstt.

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Annexure-II(b)

हरियाणाशहरीविकासप्राधिकरण

HSVP

OFFICE OF THE EXECUTIVE ENGINEER,
HSVP DIVISION No. VI, GURUGRAM
Primary School Building, M-Block, South City-I Near Plot No-M-217.

By Email/By Dak/By Hand

To,

M/s Signature Global India Ltd.,
Corp. Office: Unit No. 101, Ground Floor, Tower-A,
Signature Tower, South City-I, Gurugram.

Memo No: 317249 **Dated:** 26-11-2024

Sub: - **Assurance for Fresh water supply drinking water during operational phase total fresh water Requirement 1823 KLD of for our Industrial Park Project under Scheme (135.7250 Acres) falling in the revenue estate of village Sidhrawali, Tehsil- Manesar, Distt. Gurugram.**

Ref: - **Your application dated 26.11.2024 on the above noted subject.**

In this context, it is intimated that the land for Master Roads, Water Supply, Sewerage & SWD, for master plan of 2031-AD for sohna has yet not been acquired and master services of Water Supply will be planned after acquisition of land accordingly. After approval and execution of Water Supply Scheme, the water supply connection will be sanctioned on your request as per HSVP by law.

This is for your kind information please.

DA/- Nil

Executive Engineer,
HSVP, Division No-VI,
Gurugram.

Signatureglobal (India) Ltd.

Annexure-II(c)

हरियाणाशहरीविकासप्राधिकरण

HSVP

OFFICE OF THE EXECUTIVE ENGINEER,
HSVP DIVISION No. VI, GURUGRAM
Primary School Building, M-Block, South City-I Near Plot No-M-217.

By Email/By Dak/By Hand

To

M/s Signature Global India Ltd.,
Corp. Office: Unit No. 101, Ground Floor, Tower-A,
Signature Tower, South City-I, Gurugram.

Memo No: 317251 **Dated:** 26-11-2024

Sub: - **Assurance for External Sewerage Connection for discharge of 1195KLD surplus treated domestic effluents after commissioning for our proposed Industrial park Plotted Colony under Scheme (135.7250 Acres) falling in the revenue estate of village Sidhrawali, Tehsil-Manesar, Distt. Gurugram.**

Ref: - **Your application dated 26.11.2024 on the above noted subject.**

In this context, it is intimated that the land for Master Roads, Water Supply, Sewerage & SWD, for master plan of 2031-AD for Pataudi has yet not been acquired and master services of Sewerage Line will be planned after acquisition of land accordingly. After approval and construction of Sewerage Treatment Plant & laying of master sewer line, the Sewerage connection will be sanctioned on your request as per HSVP by law.

This is for your kind information please.

DA/- Nil

Executive Engineer,
HSVP, Division No-VI,
Gurugram.

Signatureglobal (India) Ltd.

Signatureglobal (India) Ltd.

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DAKSHIN HARYANA BIJLI VITRAN NIGAM

DHBVN

(A Government of Haryana Undertaking)

Superintending Engineer 'OP' Circle-I
Mehrauli Road, Gurugram.
Phone 0124-2322427
Fax No. 0124-2306590
e-mail seop1gurugram@dhbvn.org.in

To

Annexure-II(d)

M/s Signature Global (India) Ltd.
Ground Floor, Tower-A,
Signature Tower, South City-1
Gurugram-122001.

Memo No. Ch.28 / Drg.-PLC Dated: 06 /09/2024

Sub: **Assurance Certificate of DHBVN for development of Industrial Plotted Colony over an area measuring 129.65625 acres in the revenue estate of village Shidharawali, Tehsil Manesar, Distt. Gurugram (License No.104 of 2024 dated 01.08.2024 valid upto 31.07.2029) to be developed by M/s Signature Global India Ltd. Decalared load 14313.37 KVA.**

Ref : Your Firm Letter No. Nil dated 24.08.2024(Received in this office on dt. 28.08.2024).

It is hereby assured that the power requirement of tentative load of 14313.37 KVA shall be considered from the nearest 220/33KV substation at the time of actual requirement as per DHBVN norms at the voltage level of 33KV subject to the following conditions:-

1. Subject to availability of power and infrastructure at the time of actual release of connection.
2. Necessary charges will be got deposited by your as per latest Nigam instructions and compliance of all other instructions of Nigam will be ensured as per standing instructions of the Nigam/HERC regulation.
3. The necessary infrastructure will be laid by you at your own cost. The piece of land will be provided by you for the switching station / sub-station as per instructions of the Nigam.
4. The letter will be valid till the validity of license in view of Sales Circular No.D-6/2022 issued by CE/Commercial DHBVN, Hisar vide Memo No. Ch-06/SE/C/R-16/380/Vol-I dated 10.03.2022.

06/09/2024

Superintending Engineer
'OP' Circle-I DHBVN, Gurugram

Copy to:-

The XEN 'OP' Divn. DHBVN Manesar for information, please.

Signatureglobal (India) Ltd

Signature Global (India) Ltd. Gurugram

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Annexure-II(e)

प्रेषक,

उपायुक्त, गुरूग्राम।

सेवा में,

M/s SIGNATUREGLOBAL (INDIA) LIMITED,
[formerly known as signature global (India) Private Limited].,
Ground Floor, Tower-A, Signature Tower,
South City-I, Gurugram.

क्रमांक 74 /एम0बी0 दिनांक 30/5/2024

विषयः— **NOC for Aravalli Project Plantation 1992 for setting up of Industrial Plotted Colony at Village Sidhrawali, Tehsil Manesar, District Gurugram, Haryana (regarding report of Tehsildar and DFO, Gurugram)..**

उपरोक्त विषय के संदर्भ में।

विषयाधीन मामले में उक्त के सम्बन्ध में तहसीलदार, मानेसर व उप वन संरक्षक, गुरूग्राम से रिपोर्ट प्राप्त की गई जो निम्न प्रकार है:—

तहसीलदार, मानेसर ने अपने कार्यालय के पत्र क्रमांक 343/ओ0के0 दिनांक 09.05.2024 के द्वारा रिपोर्ट इस कार्यालय मे प्रेषित की है जिसमें लिखा है कि रिपोर्ट पटवारी हल्का अनुसार मौजा सिधरावली, तहसील मानेसर जिला गुरूग्राम हरियाणा की प्रस्तावित भूमि का राजस्व रिकोर्ड का अवलोकन करने उपरान्त मांगी गई रिपोर्ट बिन्दूवार निम्न है:—

1. प्रार्थना पत्र में वर्णित मु0/कीला नं0 56//15(8-0), 57//11(8-0), 12/1(0-2), 65//21/2(7-19), 22(8-0), 23(8-0), 24(8-0), 66//1(8-0), 10(8-0), 11(8-0), 20(8-0), 21(8-0), 67//5(7-4), 6(7-12), 15/3(1-12), 17(8-0), 23/3(0-4), 24/1(7-18), 25(8-0), 74//15/3/2/2(0-16), 16/2/2/1/2(0-2), 75//1/2/2/2/2(0-2), 2/2/2/2(3-11), 3(7-11), 4/3(1-4), 5/3(2-3), 6(8-0), 7/1(2-18), 7/2(5-2), 8/1(3-2), 8/2(4-18), 9(8-0), 11/2/2(7-9), 12/1(2-9), 12/2(5-11), 13(8-0), 14(8-0), 15(8-0), 16(8-0), 17(8-0), 18(8-0), 19/1(2-18), 20/1(2-18), 23(8-0), 24(8-0), 25(8-0), 76//1/4(3-11), 2/2(1-5), 4/2(2-10), 5/1(6-0), 5/2(2-0), 6(8-0), 7(8-0), 8/1/1(2-5), 8/3/2(0-13), 9/1/2(0-4), 10(8-0), 11(8-0), 12(8-0), 13(8-0), 14(8-0), 15(8-0), 16(8-0), 17(8-0), 18(8-0), 19(8-0), 20(8-0), 21/1(2-4), 21/2(5-16), 22(8-0), 23(8-0), 24(8-0), 25/1/1(3-16), 25/1/2(0-4), 25/2(4-0), 77//1(8-0), 10(8-0), 11(8-0), 12(8-0), 19(8-0), 20(8-0), 21(8-0), 22(8-0), 23(8-0), 24(8-0), 25(7-12), 89//11/2(6-0), 16(7-12), 17(8-0), 18(8-0), 19/3(4-3), 19/1(0-7), 20/1(7-9), 21/1(2-14), 21/3(0-5), 22/2(7-8), 23(8-0), 24(8-0), 25(7-11), 90//1(8-0), 2(8-0), 3(3-0), 4(8-0), 5(7-12), 6/1(4-4), 6/2(3-8), 7(8-0), 8(8-0), 9/1(1-7), 9/3(5-3), 9/2(0-4), 9/4(1-6), 10(8-16), 12(5-2), 13(10-0), 14(8-0), 91//1(8-0), 2(8-0), 3(8-0), 4(8-0), 5/2(7-12), 6(5-9), 7(7-2), 8(8-0), 9(8-0), 10(8-0), 11(7-18), 12(9-18), 13(8-15), 92//2/2(5-18), 3/1(5-8), 3/2(2-0), 3/3(0-12), 4(8-0), 5(8-0), 6(8-0), 7(8-0), 8/1(3-8), 8/2(4-12), 9/1(0-8), 9/2(7-12), 12/1(7-12), 12/2(0-8), 13(8-0), 14/1(1-14), 15(5-7), 18(6-0), 19/1(4-16), 19/2(3-4), 20/1(7-10), 22(4-15), 98//2(5-17), 3(8-0), 4(8-0), 5(7-12), 6(7-12), 7(8-16), 8(3-13), 15(6-2), 78//1(8-0), 2(8-0), 3(8-0), 4/1(7-0), 6/3(0-2), 7/2(2-0), 8(8-0), 9(8-0), 10(8-0), 11(8-0), 12(8-0), 13(8-0), 14/1/1(2-3), 18/1(0-4), 19(8-12), 20/1(1-11), 93//15/3(0-2), 16/1(3-1), 77//16(7-13), 89//1(8-0), 10/1(3-2), 10/2(4-18), 11/1(2-0) कीला 182 रकबा 1079 कनाल 6 मरला मौजा सिधरावली तहसील मानेसर जिला गुरूग्राम दिनांक 07.05.1992 के नोटिफिकेशन अनुसार अरावली क्षेत्र मे नहीं है।
2. अराजी मुतनाजा भूमि दिनाक 07.05.1992 के नोटिफिकेशन से पूर्व तथा पश्चात मिसल हकीयत/चकबन्दी तक किस्म गैर मुमकीन पहाड, गैर मु0 राडा, गैर मु0 बीहड/बंजर बीहड व रूद्र नहीं रही है।

Signatureglobal (India) Ltd.

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3. अराजी मुतनाजा भूमि दिनांक 07.05.1992 के नोटिफिकेशन से पूर्व किस्म चाही तथा नोटिफिकेशन के पश्चात किस्म चाही/गैर मु0/ब.क. है।
4. अराजी मुतनाजा भूमि पर मिसल हकीयत/चकबन्दी ताहाल कभी भी शामलात देह/पंचायत देह/नगर पालिका व नगर निगम की मलकियत नहीं रही है।
5. अराजी मुतनाजा भूमि पर किसी माननीय न्यायालय में केस का कोई इन्द्राज जमाबन्दी के खाना कैफियत में दर्ज नहीं है।
6. अराजी मुतनाजा भूमि SEZ(Special Econimical Zone) में नहीं है।
7. अराजी मुतनाजा भूमि मु0/कीला नं0 89//19मिन(3–10), 20मिन(0–11), 21मिन(2–12), 22मिन, पर बरूवे रपट नं0 285/02.01.2017 अनुसार अवार्ड हो चुका है व बरूवे रपट नं0 351/04.02.2006 के अनुसार मु0/किला नं0 75//9मिन पर धारा 3ए हो चुकी है व बरूवे रपट नं0 390/29.03.2004 के अनुसार 89//1, 10/1, 10/2, 11/1 आड रहन है।
8. अराजी मुतनाजा भूमि मु0/किला नं0 89//1(8–0), 10/1(3–2), 10/2(4–18), 11/1(2–0), किता 4 रकबा 18 कनाल 0 मरला में मै0 सनगोल्ड हाईटस एण्ड डेवलपर्स एल.एल.पी 2/5 भाग की मालिक व मु0/किला नं0 77/18(7–13), में मै0 सनगोल्ड हाईटस एण्ड डेवलपर्स एल.एल.पी 1/6 भाग की मालिक है व मु0/किला नं0 76//9/2/1(3–6), 8/3/2(0–13) किता 2 रकबा 3 कनाल 19 मरला में मै0 सनगोल्ड हाईटस एण्ड डेवलपर्स एल.एल.पी मालिक है। व मु0/कीला नं0 76//8/1/1(2–5), 9/1/2(0–12), में मै0 सनगोल्ड हाईटस एण्ड डेवलपर्स एल.एल.पी मालिक है व बाकी शेष बचे नबरान में मै0 सनगोल्ड हाईटस एण्ड डेवलपर्स एल.एल.पी मालिक है।

उप वन संरक्षक, गुरुग्राम ने अपने कार्यालय के पत्र क्रमांक 409-G दिनांक 17.05.2024 के द्वारा अवगत कराया है कि उनके कार्यालय द्वारा दिनांक 29.02.2024 (M/s Signatureglobal (India) Ltd.) को गांव सिधरावली, जिला गुरूग्राम के 135.0125 एकड क्षेत्र की फॉरेस्ट क्लेरिफिकेशन ऑनलाईन जारी की जा चुकी है। जिसकी छाया प्रति इस कार्यालय में प्रेषित की है जिसमें लिखा है कि Applicant Mr. Sanjay Kumar Varshney, M/s SIGNATUREGLOBAL (INDIA) LIMITED [formerly known as signature global (India) Private Limited]., having Rectangle No./Murba No./Killa No. 56//15(8-0), 57//11(8-0), 12/1(0-2), 65//21/2(7-19), 22(8-0), 23(8-0), 24(8-0), 66//1(8-0), 10(8-0), 11(8-0), 20(8-0), 21(8-0), 67//5(7-4), 6(7-12), 15/3(1-12), 17(8-0), 23/3(0-4), 24/1(7-18), 25(8-0), 74//15/3/2/2(0-16), 16/2/2/1/2(0-2), 75//1/2/2/2/2(0-2), 2/2/2/2(3-11), 3(7-11), 4/3(1-4), 5/3(2-3), 6(8-0), 7/1(2-18), 7/2(5-2), 8/1(3-2), 8/2(4-18), 9(8-0), 11/2/2(7-9), 12/1(2-9), 12/2(5-11), 13(8-0), 14(8-0), 15(8-0), 16(8-0), 17(8-0), 18(8-0), 19/1(2-18), 20/1(2-18), 23(8-0), 24(8-0), 25(8-0), 76//1/4(3-11), 2/2(1-5), 4/2(2-10), 5/1(6-0), 5/2(2-0), 6(8-0), 7(8-0), 8/1(3-4), 8/3(1-12), 9/1(1-12), 10(8-0), 11(8-0), 12(8-0), 13(8-0), 14(8-0), 15(8-0), 16(8-0), 17(8-0), 18(8-0), 19(8-0), 20(8-0), 21/1(2-4), 21/2(5-16), 22(8-0), 23(8-0), 24(8-0), 25/1/1(3-16), 25/1/2(0-4), 25/2(4-0), 77//1(8-0), 10(8-0), 11(8-0), 12(8-0), 19(8-0), 20(8-0), 21(8-0), 22(8-0), 23(8-0), 24(8-0), 25(7-12), 89//11/2(6-0), 16(7-12), 17(8-0), 18(8-0), 19/3(4-3), 19/1(0-7), 20/1(7-9), 21/1(2-14), 21/3(0-5), 22/2(7-8), 23(8-0), 24(8-0), 25(7-11), 90//1(8-0), 2(8-0), 3(8-0), 4(8-0), 5(7-12), 6/1(4-4), 6/2(3-8), 7(8-0), 8(8-0), 9/1(1-7), 9/3(5-3), 9/2(0-4), 9/4(1-6), 10(8-16), 12(5-2), 13(10-0), 14(8-0), 91//1(8-0), 2(8-0), 3(8-0), 4(8-0), 5/2(7-12), 6(5-9), 7(7-2), 8(8-0), 9(8-0), 10(8-0), 11(7-18), 12(9-18), 13(8-15), 92//2/2(5-18), 3/1(5-8), 3/2(2-0), 3/3(0-12), 4(8-0), 5(8-0), 6(8-0), 7(8-0), 8/1(3-8), 8/2(4-12), 9/1(0-8), 9/2(7-12), 12/1(7-12), 12/2(0-8), 13(8-0), 14/1(1-14), 15(5-7), 18(6-0), 19/1(4-16), 19/2(3-4), 20/1(7-10), 22(4-15), 98//2(5-17), 3(8-0), 4(8-0), 5(7-12), 6(7-12), 7(8-16), 8(3-13), 15(6-2), 78//1(8-0), 2(8-0), 3(8-0), 4/1(7-0), 6/3(0-2), 7/2(2-0), 8(8-0), 9(8-0), 10(8-0), 11(8-0), 12(8-0), 13(8-0), 14/1/1(2-3), 18/1(4-0), 19(8-0), 20/1(1-11), 93//15/3(2-0), 16/1(3-1), 20/2min(1-5), 21min(1-12), 89//1min(1-12), 10/1min(0-12), 10/2min(0-19), 11/1min(0-8), 77//16min(1-5) Land Measurements 135.0125 (Acre) Land Location

- Association

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Village Sidhrawali, District Gurugram made a proposal to use this land for Residential And Commercial Project. It is made clear that :-

A) As per records available above said land is not part of notified Reserved Forest, protected Forest under Indian Forest Act, 1927 or any area closed under section 4 of Punjab Land Preservation Act 1900.

B) It is clarified that by the Notification No. S.O 8/P.A 7/1900/S. 4/2013 dated 04-01-13 all Revenue Estate of Gurugram is notified u/s 4 of PLPA 1900 and S.O 81/PA 2/1900/S.3/2012 u/s 3 of PLPA 1900. The area is however not recorded as Forest in the Government record but felling of any tree is strictly prohibited without the permission of Divisional Forest officer, Gurugram.

C) If approach is required from Protected Forest by the user agency, the clearance/ regularization under Forest Conservation Act 1980 will be required. Without prior clearance from Forest Department, the use of Forest land for approach road is strictly prohibited. **M/s SIGNATUREGLOBAL (INDIA) LIMITED, whose land is located at Village/City Sidhrawali, District Gurugram** must obtain clearance as applicable under Forest Conservation Act, 1980.

D) As per the records available with the Forest Department Gurugram the area does not fall in areas where plantations were raised by the Forest Department under Aravali project.

E) All other statutory clearances mandated under the Environment protection Act, 1986, as per the notification of Ministry of Environment and Forest, Government of India dated 07-05-1992 or any other Act/Order shall be obtained as applicable by the project proponents from the concerned authorities.

F) The project proponent will not violate any Judicial Order/Direction issued by the Hon'ble Supreme Court/High Courts.

G) It is clarified that the Hon'ble Supreme Court has issued various judgments dated 07-05-2002, 29-10-2002, 16-12-2002, 18-03-2004, 14-05-2008 etc. pertaining to Aravali region in Haryana, which should be complied with.

H) It shall be the responsibility of user agency/applicant to get necessary clearances/ permissions under various Acts and Rules applicable if any, from the respective authorities/department.

I) This certificate is not applicable in case of Environment Department notification dated 10.03.2016 for Screening Plant, and notification dated 11.05.2016 for Stone Crusher. Investor/Applicant has to take clearance from Environment Department in case of Screening Plant and Stone Crusher.

It is subject to the following conditions:

1. Clarification is Hereby Issued Subject To the Conditions Mentioned Above.

अतः तहसीलदार, मानेसर व उप वन संरक्षक, गुरूग्राम की रिपोर्ट में वर्णित शर्तो अनुसार आपको उक्त वर्णित भूमि Village Sidhrawali, Tehsil Manesar, District Gurugram के मु0/कीला न0 89//19मिन(3–10), 20मिन(0–11), 21मिन(2–12), 22मिन पर बरूवे रपट नं0 285/02.01.2017 अनुसार अवार्ड हो चुका है व बरूवे रपट नं0 351/04.02.2008 के अनुसार मु0/किला न0 75//8मिन पर धारा 3ए हो चुकी है को छोड़कर बाकी वर्णित भूमि के कीला नम्बरान की Aravalli Clearance/Non Forest Land रिपोर्ट इस शर्त पर जारी की जानी उचित होगी कि प्रार्थी कम्पनी को दी गई एनओसी में यदि किसी नम्बरों पर हरियाणा सरकार के किसी भी विभाग द्वारा किसी प्रकार की भूमि अर्जन कार्यवाही धारा 4, 6 व अवार्ड आदि राजस्व रिकार्ड अनुसार पाया गया तो सम्बन्धित नम्बरो की अरावली एनओसी स्वतः रद्द समझी जायेगी जिसके लिए प्रार्थी कम्पनी स्वयं जिम्मेवार होगी।

Signatureglobal (India) Ltd.

कृते. उपायुक्त, गुरूग्राम।

-20-

Annexure-II(f)

प्रभागीय वन अधिकारी द्वारा स्पष्टीकरण पत्र
Clarification letter by
Concerned Divisional Forest Officer
हरियाणा सरकार / Government of Haryana

हरियाणा भू-परिक्षण अधिनियम,1900 (1900 का पंजाब का अधिनियम II) अथवा वन अथवा प्रतिबंधित भूमि से संबंध मे निराक्षेप प्रमाण पत्र।
NOC in respect of Haryana Land and Preservation Act, 1900 (Punjab Act, II of 1900) or Forest or Restricted lands.

नाम Name	संजय कुमार वर्षनेय Sanjay Kumar Varshney
संगठन का नाम Organisation Name	Signatureglobal (india) Limited
वर्तमान पता Current Address	Sidhrawali,Gurgaon,Haryana
भूमि स्थान Land Location	Sidhrawali,Gurgaon,Sidhrawali
भूमि मापन Land Measurements	135.0125 (Acre)
आयत नम्बर / मुरबा नम्बर Rectangle No./ Murba No.	56//15(8-0),57//11(8-0),12/1(0-2),65//21/2(7-19),22(8-0),23(8-0),24(8-0),66//1(8-0),10(8-0),11(8-0),20(8-0),21(8-0),67//5(7-4),6(7-12),15/3(1-12),17(8-0),23/3(0-4),24/1(7-18),25(8-0),74//15/3/2/2(0-16),16/2/2/1/2(0-2),75//1/2/2/2/2(0-2),2/2/2/2(3-11),3(7-11),4/3(1-4),5/3(2-3),6(8-0),7/1(2-18),7/2(5-2),8/1(3-2),8/2(4-18),9(8-0),11/2/2(7-9),12/1(2-9),12/2(5-11),13(8-0),14(8-0),15(8-0),16(8-0),17(8-0),18(8-0),19/1(2-18),20/1(2-18),23(8-0),24(8-0),25(8-0),76//1/4(3-11),2/2(1-5),4/2(2-10),5/1(6-0),5/2(2-0),6(8-0),7(8-0),8/1(3-4),8/3(1-12),9/1(1-12),10(8-0),11(8-0),12(8-0),13(8-0),14(8-0),15(8-0),16(8-0),17(8-0),18(8-0),19(8-0),20(8-0),21/1(2-4),21/2(5-16),22(8-0),23(8-0),24(8-0),25/1/1(3-16),25/1/2(0-4),25/2(4-0),77//1(8-0),10(8-0),11(8-0),12(8-0),19(8-0),20(8-0),21(8-0),22(8-0),23(8-0),24(8-0),25(7-12),89//11/2(6-0),16(7-12),17(8-0),18(8-0),19/3(4-3),19/1(0-7),20/1(7-9),21/1(2-14),21/3(0-5),22/2(7-8),23(8-0),24(8-0),25(7-11),90//1(8-0),2(8-0),3(8-0),4(8-0),5(7-12),6/1(4-4),6/2(3-8),7(8-0),8(8-0),9/1(1-7),9/3(5-3),9/2(0-4),9/4(1-6),10(8-16),12(5-2),13(10-0),14(8-0),91//1(8-0),2(8-0),3(8-0),4(8-0),5/2(7-12),6(5-9),7(7-2),8(8-0),9(8-0),10(8-0),11(7-18),12(9-18),13(8-15),92//2/2(5-18),3/1(5-8),3/2(2-0),3/3(0-12),4(8-0),5(8-0),6(8-0),7(8-0),8/1(3-8),8/2(4-12),9/1(0-8),9/2(7-12),12/1(7-12),12/2(0-8),13(8-0),14/1(1-14),15(5-7),18(6-0),19/1(4-16),19/2(3-4),20/1(7-10),22(4-15),98//2(5-17),3(8-0),4(8-0),5(7-12),6(7-12),7(8-16),8(3-13),15(6-2),78//1(8-0),2(8-0),3(8-0),4/1(7-0),6/3(0-2),7/2(2-0),8(8-0),9(8-0),10(8-0),11(8-0),12(8-0),13(8-0),14/1/1(2-3),18/1(4-0),19(8-0),20/1(1-11),93//15/3(2-0),16/1(3-1),20/2min(1-5),21min(1-12),89//1min(1-12),10/1min(0-12),10/2min(0-19),11/1min(0-8),77//16min(1-5)

Reference No. (SRN):- HUQ-DTC-CHXW
जारी करने की तिथि / Date of Issuance: 29-02-2024
जारी करने का स्थान / Place of Issuance: Gurgaon
जारी करने वाला प्राधिकरण / Issuing Authority: Divisional Forest Officer

This is a Digitally Signed Certificate and does not require physical signature. The authenticity of this certificate can be verified from the verification link mentioned below:
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प्रभागीय वन अधिकारी द्वारा स्पष्टीकरण पत्र
Clarification letter by
Concerned Divisional Forest Officer
हरियाणा सरकार / Government of Haryana

हरियाणा भू-परिक्षण अधिनियम,1900 (1900 का पंजाब का अधिनियम II) अथवा वन अथवा प्रतिबंधित भूमि से संबंध मे निराक्षेप प्रमाण पत्र।
NOC in respect of Haryana Land and Preservation Act, 1900 (Punjab Act, II of 1900) or Forest or Restricted lands.

किला नम्बर Killa Number	56//15(8-0),57//11(8-0),12/1(0-2),65//21/2(7-19),22(8-0),23(8-0),24(8-0),66//1(8-0),10(8-0),11(8-0),20(8-0),21(8-0),67//5(7-4),6(7-12),15/3(1-12),17(8-0),23/3(0-4),24/1(7-18),25(8-0),74//15/3/2/2(0-16),16/2/2/1/2(0-2),75//1/2/2/2/2(0-2),2/2/2/2(3-11),3(7-11),4/3(1-4),5/3(2-3),6(8-0),7/1(2-18),7/2(5-2),8/1(3-2),8/2(4-18),9(8-0),11/2/2(7-9),12/1(2-9),12/2(5-11),13(8-0),14(8-0),15(8-0),16(8-0),17(8-0),18(8-0),19/1(2-18),20/1(2-18),23(8-0),24(8-0),25(8-0),76//1/4(3-11),2/2(1-5),4/2(2-10),5/1(6-0),5/2(2-0),6(8-0),7(8-0),8/1(3-4),8/3(1-12),9/1(1-12),10(8-0),11(8-0),12(8-0),13(8-0),14(8-0),15(8-0),16(8-0),17(8-0),18(8-0),19(8-0),20(8-0),21/1(2-4),21/2(5-16),22(8-0),23(8-0),24(8-0),25/1/1(3-16),25/1/2(0-4),25/2(4-0),77//1(8-0),10(8-0),11(8-0),12(8-0),19(8-0),20(8-0),21(8-0),22(8-0),23(8-0),24(8-0),25(7-12),89//11/2(6-0),16(7-12),17(8-0),18(8-0),19/3(4-3),19/1(0-7),20/1(7-9),21/1(2-14),21/3(0-5),22/2(7-8),23(8-0),24(8-0),25(7-11),90//1(8-0),2(8-0),3(8-0),4(8-0),5(7-12),6/1(4-4),6/2(3-8),7(8-0),8(8-0),9/1(1-7),9/3(5-3),9/2(0-4),9/4(1-6),10(8-16),12(5-2),13(10-0),14(8-0),91//1(8-0),2(8-0),3(8-0),4(8-0),5/2(7-12),6(5-9),7(7-2),8(8-0),9(8-0),10(8-0),11(7-18),12(9-18),13(8-15),92//2/2(5-18),3/1(5-8),3/2(2-0),3/3(0-12),4(8-0),5(8-0),6(8-0),7(8-0),8/1(3-8),8/2(4-12),9/1(0-8),9/2(7-12),12/1(7-12),12/2(0-8),13(8-0),14/1(1-14),15(5-7),18(6-0),19/1(4-16),19/2(3-4),20/1(7-10),22(4-15),98//2(5-17),3(8-0),4(8-0),5(7-12),6(7-12),7(8-16),8(3-13),15(6-2),78//1(8-0),2(8-0),3(8-0),4/1(7-0),6/3(0-2),7/2(2-0),8(8-0),9(8-0),10(8-0),11(8-0),12(8-0),13(8-0),14/1/1(2-3),18/1(4-0),19(8-0),20/1(1-11),93//15/3(2-0),16/1(3-1),20/2min(1-5),21min(1-12),89//1min(1-12),10/1min(0-12),10/2min(0-19),11/1min(0-8),77//16min(1-5)
प्रयोजन Purpose	Residential And Commercial Project

जारी करने की तिथि / Date of Issuance: 29-02-2024
जारी करने का स्थान / Place of Issuance: Gurgaon
जारी करने वाला प्राधिकरण / Issuing Authority: Divisional Forest Officer

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प्रभागीय वन अधिकारी द्वारा स्पष्टीकरण पत्र
Clarification letter by
Concerned Divisional Forest Officer
हरियाणा सरकार / Government of Haryana

हरियाणा भू-परिक्षण अधिनियम,1900 (1900 का पंजाब का अधिनियम II) अथवा वन अथवा प्रतिबंधित भूमि से संबंध मे निराक्षेप प्रमाण पत्र।
NOC in respect of Haryana Land and Preservation Act, 1900 (Punjab Act, II of 1900) or Forest or Restricted lands.

Applicant Sanjay Kumar Varshney located at village /city Sidhrawali district Gurgaon made a proposal to use this land for Residential And Commercial Project. It is made clear that:

a) As per records available above said land is not part of notified Reserved Forest, Protected Forest under Indian Forest Act, 1927 or any area closed under section 4 of Punjab Land Preservation Act, 1900.

b) It is clarified that by the Notification No. S.O.8/P.A 2/1900/S. 4/2013 dated 4th January, 2013, all Revenue Estate of Gurgaon is notified u/s 4 of PLPA 1900 and S.O.81/PA.2/1900/S.3/2012 u/s 3 of PLPA 1900. The area is however not recorded as forest in the Government record but felling of any tree is strictly prohibited without the permission of Divisional Forest Officer, Gurgaon.

c) If approach is required from Protected Forest by the user agency, the clearance/ regularization under Forest Conservation Act 1980 will be required. Without prior clearance from Forest Department, the use of Forest land for approach road is strictly prohibited. M/s Signatureglobal (india) Limited whose land is located at village/city, Sidhrawali District Gurgaon must obtain clearance as applicable under Forest Conservation Act 1980.

d) As per the records available with the Forest Department, Gurgaon the area does not fall in areas where plantations were raised by the Forest Department under Aravalli project.

e) All other statutory clearances mandated under the Environment Protection Act. 1986, as per the notification of Ministry of Environment and Forests, Government of India, dated 07-05-1992 or any other Act/ order shall be obtained as applicable by the project proponents from the concerned authorities.

f) The project proponent will not violate any Judicial Order/ direction issued by the Hon'ble Supreme Court/ High Courts.

g) It is clarified that the Hon'ble Supreme Court has issued various judgments dated 07.05.2002, 29.10.2002, 16.12.2002, 18.03.2004, 14.05.2008 etc. pertaining to Aravalli region in Haryana, which should be complied with.

h) It shall be the responsiblity of user agency/ applicant to get necessary clearances/ permissions under various Acts and Rules applicable if any, from the respective authorities/ Department.

i) This certificate is not applicable in case of Environment Department notification dated 10.03.2016 for Screening Plant, and notification dated 11.05.2016 for Stone Crusher. Investor/Applicant has to take clearance from Environment Department in case of Screening Plant and Stone Crusher.

It is subject to the following conditions:

1.Clarification Is Hereby Issued Subject To The Conditions Mentioned Above.

Signatureglobal (India) Ltd

Date: 29-02-2024
Place: Gurgaon

Rajeev Tejyan,
(Divisional Forest Officer)

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Annexure-III

-23-

Directorate of Town and Country Planning, Haryana

Nagar Yojana Bhavan, Plot No.3, Sector-18A, Madhya Marg, Chandigarh, Chandigarh,
Phone: 0172-2549349; e-mail: tcpharyana6@gmail.com

Regd.

LC-III
(See Rule 10)

To

Sungold Heights Developers LLP.,
In collaboration with Signature Global (India) Ltd.,
13th Floor, Dr. Gopal Das Bhawan,
28 Barakhamba Road, Connaught Place,
New Delhi-110001.

Memo No. LC-5139-B-DS (AK)/2024/ 38456 Dated: 06-12-24

Subject: **Letter of Intent:-Request for grant of licence for setting up of Industrial Plotted Colony over an area measuring 6.06875 acres (in addition to licence no. 104 of 2024 dated 01.08.2024) falling in the revenue estate of village Sidhrawali, Tehsil Manesar, District Gurugram- Signature Global (India) Ltd.**

Please refer to your application dated 07.06.2024 on the above cited subject.

Your request for grant of licence under section 3 of the Haryana Development and Regulation of Urban Areas Act, 1975, and Rules framed there under for development of Industrial Plotted Colony over an area measuring 6.06875 acres (in addition to licence no. 104 of 2024 dated 01.08.2024) falling in the revenue estate of village Sidhrawali, Tehsil Manesar, District Gurugram has been considered and it is proposed to grant license for setting up of aforesaid Industrial Plotted Colony. You are, therefore, called upon to fulfill the following requirements/ pre-requisites laid down in Rule 11 of the Haryana Development and Regulation of Urban Areas Rule, 1976 within a period of 60 days from the date of issue of this letter, failing which request for grant of licence shall be refused:-

1. To deposit an amount of **Rs. 1,69,054/-** on account of scrutiny charges in favour of the Director, Town & Country Planning, Haryana through online mode.

2. You have an option to either to deposit an amount of **Rs. 76,89,89,881/-** Crore on account of External Development Charges in favour of Director, Town and Country Planning, Haryana, Chandigarh through online on e-payment portal of the Department before grant of licence or furnish 25% Bank Guarantee of **Rs.19,22,47,470/-** lacs on account of External Development Charges before grant of licence and shall pay the amount of EDC in the ten half yearly installments each with normal interest of 12% p.a. and penal interest of 3% for the delayed period in favour of Director, Town & Country Planning, Haryana, payable at Chandigarh.

D.T.C.P.(Hr).

3. To furnish bank guarantee amounting **64.48075 lacs** against 25% of the total cost of Internal Development Works amounting Rs. 257.923 lacs.

**It is made clear that bank guarantee of Internal Development Works has been worked out on the interim rates and you will have to submit the additional bank guarantee, if any required, at the time of approval of Service Plan/Estimate. With an increase in the cost of construction, you would be required to furnish an additional bank guarantee within 30 days on demand.

4. To execute two agreements i.e. LC-IV & Bilateral Agreement on Non-Judicial Stamp Paper of 100/-. Further, following additional clauses shall be added in LC-IV agreement as per Government instruction dated 14.08.2020.

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I. That the owner/developer shall integrate the bank account in which 70 percent allottee receipts are credited under Section-4(2)(l)(D) of the Real Estate Regulation and Development Act, 2016 with the online application/payment gateway of the Department, in such manner, so as to ensure that 10% of the total receipt from each payment made by an allottee is automatically deducted and gets credited to the EDC head in the State treasury.

II. That such 10% of the total receipt from each payment made by the allottee, which is received by the Department shall get automatically credited, on the date of receipt in the Government treasury against EDC dues.

III. That such 10% deduction shall continue to operate till the total EDC dues get recovered from the owner/developer.

IV. The implementation of such mechanism shall, however, have no bearing on EDC instalment schedule conveyed to the owner/developer. The owner/developer shall continue to supplement such automatic EDC deductions with payments from its own funds to ensure that by the EDC instalments that are due for payment that paid as per the prescribed schedule.

5. To submit an undertaking that:-

i) That you shall pay External Development Charges as and when the site comes in urbanizable limits.

ii) That you shall maintain and upkeep of all roads, open spaces, public park and public health services for a period of five years from the date of issue of the completion certificate unless earlier relieved of this responsibility and thereupon to transfer all such roads, open spaces, public parks and public health services free of cost to the Govt. or the local authority, as the case may be, in accordance with the provisions of Section 3(3)(a)(iii) of the Haryana Development and Regulation of Urban Areas Act, 1975.

iii) That you shall construct 18/24/30 m wide internal circulation road forming part of licenced area at your own costs and transfer the same free of cost to the Government as and when site comes in urbanizable limit.

iv) That you shall integrate the services with the HSVP services as per the approved service plans and as and when made available.

v) That you shall have no objection to the regularization of the boundaries of the licence through give and take with the land that HSVP is finally able to acquire any land in the interest of planned development and integration of services. The decision of the Competent Authority shall be binding upon you.

vi) That you shall provide basic facilities (sewer, water etc) in the colony upto the satisfaction of the Director, as on date the services are not being provided by HSVP.

vii) That you shall make your own arrangements for water supply, sewerage, drainage etc. to the satisfaction of DTCP till these services are made available and the same is made functional from External Infrastructure to be laid by Haryana Urban Development Authority or any other execution agency.

D.T.C.P.(Hr).

viii) That you shall submit NOC as required under notification dated 14.09.2006.

ix) That you shall convey "Ultimate Power Load Requirement" of the project to the concerned power utility, with a copy to the Director, with in two month period from the date of grant of licence to enable provision of site in your land for Transformers/Switching Station/ Electric Sub-Stations as per the norms prescribed by the power utility in the zoning plan of the project.

x) There is no further sale of the land applied for licence after submission of licence application till date.

xi) That you shall provide the Solar water heating system as per by HAREDA and shall be made operational where applicable before applying for an occupation certificate.

xi) That you shall provide the Solar water heating system as per by HAREDA and shall be made operational where applicable before applying for an occupation certificate.

xii) That you shall not encroach the revenue rasta passes through the site and shall provide appropriate access to the land of others situated in between the applied land.

xiii) That you shall comply with the terms and conditions of policy dated 01.10.2015 and other direction given by the Director time to time to execute the project.

xiv) That you shall submit compliance of Rule 24, 26, 27 & 28 of Rules 1976 & Section 5 of Haryana Development and Regulation of Urban Areas Act, 1975, and shall inform account number and full particulars of the scheduled bank wherein you have to deposit seventy percentum of the amount received from the plot holders for meeting the cost of Internal Development Works in the colony.

xv) That you have not violated the provision of the Haryana Ceiling of Land Holdings Act, 1972

xvi) That you have not submitted any other application for applied site for CLU /licence.

xvii) That you shall abide by the terms and condition of policy dated 01.10.2015 and 03.09.2019.

xviii) That the owner/developer shall integrate the bank account in which 70% allottee receipts are credited under Section-4(2)(l)(D) of the Real Estate Regulation and Development Act, 2016 with the online application/payment gateway of the Department, in such manner, so as to ensure that 10% of the total receipt from each payment made by an allottee is automatically deducted and gets credited to the EDC head in the State treasury.

xix) That such 10% of the total receipt from each payment made by the allottee, which is received by the Department shall get automatically credited, on the date of receipt in the Government treasury against EDC dues.

xx) That you shall follow the provisions of the Real Estate (Regulations and Development) Act, 2016 and Rules framed thereunder shall be followed by the applicant in letter and spirit.

xxi) That you shall provide the entire master services at your own cost.

D.T.C.P.(Hr).

xxii) You shall not encroach the revenue rasta passes through the applied site if any and keep it thoroughfare movement of general public.

xxiii) That you shall take prior permission from the Divisional Forest Officer, Gurugram regarding cutting of any tree in their applied site.

6. That you shall submit the NOC from the Divisional Forest Officer, Gurugram regarding applicability of any forest law/ notification on the applied site in revenue estate of village Sidhrawali at NH-48 road, before issuance of final permission.

7. That you shall submit an indemnity bond indemnifying DTCP from any loss, if occurs due to submission of undertaking submitted in respect of non-creation of third party rights on the applied land.

8. That you shall undertake to indemnify State Govt./ Department for loss occurred or legal complication arising due to pending litigation and the land owning/ developer company will be responsible for the same in respect of applied land.

9. That you shall submit an affidavit duly attested by 1st Class Magistrate, to the effect that applicants have not submitted any other application for grant of licence for development of the said land or part thereof for any purpose under the provisions of the Haryana Development and Regulation of Urban Areas Act, 1975 or any application seeking permission for change of land use under the provision of the Punjab Schedule Roads and Controlled Areas restrictions of

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Unregulated Development Act, 1963 or have not applied for licence/ permission under any other law for the time being in force.

10. That you shall submit an undertaking from the land owning companies/ owners that this land has not been sold to any person after entering into collaboration agreement with the colonizer to whom LOI is being issued and also that presently there is no collaboration agreement enforced with any other person for the same land.

11. That certificate from DRO/Deputy Commissioner, Gurugram will be submitted certifying that the applied land is still under ownership of applicant company, encumbrance free and not under acquisition proceedings.

12. That you shall submit the NOC/Access permission from NCRTC/competent authority regarding R.O.W of RRTS, before issuance of final permission.

13. You shall submit an indemnity bond indemnifying Director w.r.t. final outcome of the SLP(C) no. 15439 of 2022 of Hon'ble Supreme Court of India.

14. That company will intimate their official Email ID and the correspondence on this Email ID by the Deptt. will be treated as receipt of such correspondence.

(Amit Khatri, IAS)
Director,
Town & Country Planning,
Haryana, Chandigarh

Endst no. LC-5139-B-DS(AK)/2024/ Dated:

A copy is forwarded to the following for information and necessary action:-

i. Deputy Commissioner, Gurugram.
ii. Senior Town Planner, Gurugram.
iii. District Town Planner, Gurugram.
iv. District Town Planner(E), Gurugram.
v. Director Urban Estate Haryana, Sector-6, Panchkula.
vi. Project Manager (IT) with a request to update the status on website.

(Sanjay Narang)
District Town Planner (HQ)
For Director, Town & Country Planning
Haryana Chandigarh

To be read with LOI Memo No. 38456 Dated 06/12/24 of 2024.

Village	Name of owner	Rect. No.	Killa No.	Area (K-M)
Sidhrawali	Sungold Heights and developers LLP.	78	20/2min	5-4
			21min	6-8
		89	1min	6-8
			10/1min	2-10
			10/2min	3-19
			11/1min	1-12
		76	9/2/1	3-6
		66	22	8-0
		77	2/1	7-6
			9/2	3-18
			Total	48-11 Or 6.06875 Acres

Director
Town & Country Planning
Haryana, Chandigarh

Signatureglobal (India) Ltd.

DLF (Gibnil) Ltd.

FORM LC -V
(See Rule 12)
HARYANA GOVERNMENT
TOWN AND COUNTRY PLANNING DEPARTMENT

Licence No. 104 of 2024

This License has been granted under the Haryana Development and Regulation of Urban Areas Act, 1975 & the Rules 1976, made thereunder to Sungold Heights and Developers LLP. in collaboration with Signatureglobal (India) Limited, 13th Floor, Dr. Gopal Das Bhawan, 28 Barakhamba Road, Connaught Place, New Delhi-110001. for setting up of Industrial Plotted Colony over an area measuring 129.65625 acres in the revenue estate of village Sidhrawali, Tehsil- Manesar, District Gurugram.

1. The particulars of the land, wherein the aforesaid Industrial Plotted Colony is to be set up, are given in the Schedule annexed hereto and duly signed by the Director, Town & Country Planning, Haryana.

2. The License is granted subject to the following conditions:

(i) To deposit a sum of Rs. 16,56,63,060/- on account of Infrastructural Development Charges in two equal installments. First within 60 days from issuance of license and second within six months online at www.tcpharyana.gov.in. In failure of which, an interest @ 18% per annum for delay period shall be paid.

(ii) The licencee shall maintain and upkeep of all roads, open spaces, public park and public health services for a period of five years from the date of issue of the completion certificate unless earlier relieved of this responsibility and thereupon to transfer all such roads, open spaces, public parks and public health services free of cost to the Govt. or the local authority, as the case may be, in accordance with the provisions of Section 3(3)(a)(iii) of the Haryana Development and Regulation of Urban Areas Act, 1975.

(iii) The licencee has not submitted any other application for grant of license for development of the said land or part thereof for any purpose under the provisions of the Haryana Development and Regulation of Urban Areas Act, 1975 or any application seeking permission for change of land use under the provision of the Punjab Scheduled Roads and Controlled Areas Restriction of Unregulated Development Act, 1963.

(iv) The licencee shall obtain NOC/Clearance as per provisions of notification dated 14.09.2006 issued by Ministry of Environment & Forest, Govt. of India, if applicable before execution of development works at site.

(v) The licencee shall make own arrangements for water supply, sewerage, drainage etc. to the satisfaction of DTCP.

(vi) The licencee shall obtain clearance from competent authority, if required under Punjab Land Preservation Land Act, 1900 and any other clearance required under any other law.

(vii) That the rain water harvesting system shall be provided as per Central Ground Water Authority Norms/Haryana Govt. notification as applicable.

Director
Town & Country Planning
Haryana, Chandigarh

Signatureglobal (India) Ltd.

Signatureglobal (India) Ltd.

(viii) That the provision of solar water heating system shall be as per guidelines of Haryana Renewable Energy Development Agency and shall be made operational where applicable before applying for an Occupation Certificate.

(ix) The licencee shall use only LED fitting for internal lighting as well as campus lighting.

(x) The licencee shall convey the 'Ultimate Power Load Requirement' of the project to the concerned power utility, with a copy to the Director, within two months period from the date of grant of license to enable provision of site in licensed land for Transformers/Switching Stations/Electric Sub Stations as per the norms prescribed by the power utility in the zoning plan of the project.

(xi) The licencee shall keep pace of development atleast in accordance with sale agreement executed with the buyers of the plots as and when scheme is launched.

(xii) The licencee shall arrange power connection from UHBVNL/DHBVNL for electrification of the colony and shall install the electricity distribution infrastructure as per the peak load requirement of the colony for which licencee shall get the electrical (distribution) service plan/estimates approved from the agency responsible for installation of external electric services i.e. UHBVNL/DHBVNL and complete the same before obtaining completion certificate for the colony.

(xiii) The licencee will pay the labour cess as per policy instructions issued by Haryana Government vide Memo No. Misc. 2057-5/25/2008/2TCP dated 25.02.2010, as amended from time to time.

(xiv) The licencee shall submit compliance of Rule 24, 26, 27 & 28 of Rules 1976 & Section 5 of Haryana Development and Regulation of Urban Areas Act, 1975, and shall inform account number and full particulars of the scheduled bank wherein you have to deposit thirty percentum of the amount received from the plot holders for meeting the cost of Internal Development Works in the colony.

(xv) That no further sale has taken place after submitting application for grant of license.

(xvi) The licencee shall not give any advertisement for sale of plots/commercial area before the approval of zoning plan.

(xvii) That no provision of the Haryana Ceiling on Land Holding Act, 1972 has been violated due to purchase of applied land.

(xviii) That the revenue rasta/khal if passing through the site shall not be encroached upon and shall be kept free from all hindrances for easy movement of general public.

(xix) That the licencee shall follow the provisions of the Real Estate (Regulations and Development) Act, 2016 and Rules framed thereunder shall be followed by the applicant in letter and spirit.

(xx) The licencee shall comply with the terms and conditions of policy dated 01.10.2015, 09.03.2019 and other direction given by the Director time to time to execute the project.

(xxi) The licencee shall obtain the permission from competent authority for construction of culvert over dhana/ nala / drain / water channel what so ever, if passing through licenced land.

Signatureglobal (India) Pvt. Ltd.

(xxii) The licencee shall integrate the services with Haryana Shehri Vikas Pradhikaran Development Authority services as and when made available.

(xxiii) That area coming under the sector roads and restricted belt / green belt, if any, which forms part of licensed area and in lieu of which benefit to the extent permissible as per policy towards FAR is being granted, shall be transferred free of cost to the Govt.

(xxiv) The licencee will transfer 10% area of the licenced colony free of cost to the Government for provision of community facilities. This will give flexibility to the Director to workout the requirement of community infrastructure at sector level and accordingly make provisions. The said area will be earmarked on the layout plan to be approved alongwith the license.

(xxv) The licencee understand that the development/ construction cost of 24 m/18 m major internal roads is not included in the EDC rates and they shall pay the proportionate cost for acquisition of land, if any, alongwith the construction cost of 24 m/18 m wide major internal roads as and when finalized and demanded by the Department.

(xxvi) That it will be made clear at the time of booking of plots/commercial space that specified rates include or do not include EDC. In case of non inclusion of EDC in the booking rates, then it may be specified that same are to be charged separately as per rate fixed by the Govt. applicant company shall also provide detail of calculation of EDC per sqm/per sft to the allottees while raising such demand from the plot owners.

(xxvii) That no clubbing of residential plots for approval of integrated zoning plan of two adjoining plots under same ownership shall be permitted.

(xxviii) The licencee shall abide by the terms and conditions of the policy notified on 01.04.2016.

(xxix) The licencee shall abide by the terms and conditions of policy dated 08.02.2016 (DDJAY) and other direction given by the Director time to time to execute the project.

(xxx) The licencee shall execute the development works as per Environmental Clearance and company with the provisions of Environment Protection Act, 1986, Air (Prevention and Control of Pollution of Act 1981) and Water (Prevention and Control of Pollution of 1974). In case of any violation of the provisions of said statutes, applicant shall be liable for penal action by Haryana State Pollution Control Board or any other Authority Administering the said Act.

(xxxi) That no pre-launch/sale of commercial plot will be undertaken before approval of the building plans. That the owner/developer shall integrate the bank account in which 70 percent allottee receipts are credited under Section-4(2)(l)(D) of the Real Estate Regulation and Development Act, 2016 with the online application/payment gateway of the Department, in such manner, so as to ensure that 10% of the total receipt from each payment made by an allottee is automatically deducted and gets credited to the EDC head in the State treasury.

(xxxii) That such 10% of the total receipt from each payment made by the allottee, which is received by the Department shall get automatically credited, on the date of receipt in the Government treasury against EDC dues.

(xxxiii) That such 10% deduction shall continue to operate till the total EDC dues get recovered from the owner/developer.

(xxxiv) The implementation of such mechanism shall, however, have no bearing on EDC installment schedule conveyed to the owner/developer. The owner/developer shall continue to supplement such automatic EDC deductions with payments from its own funds to ensure that by the EDC installments that are due for payment get paid as per the prescribed schedule.

(xxxv) The licencee shall take prior permission from the Divisional Forest Officer, Gurugram regarding cutting of any tree in their applied site.

(xxxvi) Only green category industry shall be allowed in the area of the licensed industrial colony which is falling within 2 kilometers from the boundary of urbanisable zone of the development plan, excluding the peripheral roads, if proposed along urbanisable boundary. All categories of industries will be allowed in the industrial colony outside 2KM belt subject to the condition of obtaining certificate from Haryana pollution Control Board.

(xxxvii) You shall pay at least the cost of infrastructure made available by various agencies/Department of the state Government, including infrastructure sought and availed in the agriculture zone as and when demanded by the competent authority.

(xxxviii) That you shall also take necessary measures for setting up of an effluent treatment plant of appropriate size and its appropriate use and also for safe disposal of effluents after proper treatment.

3. The area/pocket-1 measuring 11.56875 acres which derives approach from land acquired for RRTS, shall be kept frozen till submission of the NOC /access permission from NCRTC/competent authority.

4. That you shall not raised any construction within 20 mtr buffer zone on either side of acquired alignment of RRTS and the same shall be kept as green/buffer zone.

5. That no third party rights shall be created over any frozen area till such area is de-freezed.

6. That plots beneath the 3 nos. nos. of 11 KV HT line and 1 no. of 200 KV HT line falling in the licensed land shall be kept frozen till shifting of respective HT lines.

7. The license is valid up to 31.07.2029.

(Amit Khatri, IAS)
Director,
Town & Country Planning
Haryana, Chandigarh

Dated: The 01.08.2024.
Chandigarh

Endst. No. LC-5139/Asstt(MS)/2024/ 24309 Dated: 01-08-2024

A copy along with a copy of schedule of land is forwarded to the following for information and necessary action: -

1. Sungold Heights and Developers LLP. In collaboration with Signatureglobal (India) Limited, 13th Floor, Dr. Gopal Das Bhawan, 28 Barakhamba Road, Connaught Place, New Delhi-110001 along with a copy of agreement, LC-IV & Bilateral Agreement and Layout Plan.
2. Chairman, Pollution Control Board, Haryana, Sector-6, Panchkula.
3. Chief Administrator, HSVP, Panchkula.
4. Managing Director, HVPN, Planning Directorate, Shakti Bhawan, Sector-6, Panchkula.
5. Joint Director, Environment Haryana-Cum-Secretary, SEAC, Paryavaran Bhawan, Sector -2, Panchkula.
6. Addl. Director Urban Estates, Haryana, Panchkula.
7. Administrator, HSVP, Panchkula.
8. Chief Engineer, HSVP, Panchkula.
9. Superintending Engineer, HSVP, Gurugram along with a copy of agreement.
10. Land Acquisition Officer, Gurugram.
11. Senior Town Planner, Gurugram along with a copy of Layout Plan.
12. Senior Town Planner (Enforcement), Haryana, Chandigarh.
13. District Revenue Officer, Gurugram.
14. District Town Planner, Gurugram along with a copy of agreement & Layout Plan.
15. Chief Accounts Officer (Monitoring) O/o DTCP, Haryana.
16. Accounts Officer, O/o DTCP along with a copy of agreement.
17. Project Manager (IT) for updation on the website.

(Sanjay Narang)
District Town Planner (HQ)
For: Director, Town & Country Planning
Haryana Chandigarh

Signatureglobal (India) Ltd.

Sungold Heights and Developers LLP (Global) Authorised Signatory

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To be read with License No. 104 Dated 01/08/ of 2024

Village	OWNERSHIP	REC.NO	KILLA NO	KANAL	MARLA
Sidhrawali	SUNGOLD HEIGHTS AND DEVELOPERS LLP	74	15/3/2/2	0	16
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	74	16/2/2/1/2	0	2
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	75	2/2/2/2	3	11
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	75	3	7	11
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	75	4/3.	1	4
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	75	5/3.	2	3
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	75	6	8	0
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	75	7/1.	2	18
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	75	7/2.	5	2
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	75	8/1.	3	2
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	75	8/2.	4	18
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	75	9	8	0
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	75	11/2/2.	7	9
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	75	12/1.	2	9
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	75	12/2.	5	11
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	75	13	8	0
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	75	14	8	0
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	75	15	8	0
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	75	16	8	0
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	75	17	8	0
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	75	18	8	0
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	75	19/1.	2	18
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	75	20/1.	2	18
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	75	23	8	0
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	75	24	8	0
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	75	25	8	0
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	76	1/4.	3	11
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	76	2/2.	1	5
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	76	4/2.	2	10
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	76	5/1.	6	0
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	76	5/2.	2	0
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	76	6	8	0
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	76	7	8	0
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	76	8/1/1	2	5
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	76	8/3/2	0	13
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	76	9/1/2	0	4
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	76	10	8	0
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	76	11	8	0
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	76	12	8	0
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	76	13	8	0
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	76	14	8	0
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	76	15	8	0
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	76	16	8	0
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	76	17	8	0
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	76	18	8	0
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	76	19	8	0
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	76	20	8	0

Signatureglobal (India)

DTCP (HR)

Sidhrawali	SUNGOLD HEIGHTS AND DEVELOPERS LLP	76	21/1	2	4
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	76	21/2	5	16
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	76	22	8	0
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	76	23	8	0
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	76	24	8	0
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	76	25/1/1	3	16
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	76	25/1/2	0	4
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	76	25/2	4	0
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	77	1	8	0
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	77	10	8	0
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	77	11	8	0
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	77	12	8	0
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	77	19	8	0
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	77	20	8	0
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	77	21	8	0
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	77	22	8	0
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	77	23	8	0
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	77	24	8	0
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	77	25	7	12
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	66	1	8	0
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	66	10	8	0
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	66	11	8	0
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	66	20	8	0
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	66	21	8	0
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	67	5	7	4
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	67	6	7	12
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	67	15/3	1	12
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	67	17	8	0
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	67	23/3	0	4
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	67	24/1	7	18
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	67	25	8	0
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	89	11/2.	6	0
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	89	16	7	12
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	89	17	8	0
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	89	18	8	0
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	89	19/3	4	3
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	89	19/1	0	7
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	89	20/1	7	9
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	89	21/1	2	14
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	89	21/3	0	5
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	89	22/2	7	8
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	89	23	8	0
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	89	24	8	0
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	89	25	7	11
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	98	2	5	17
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	98	3	8	0
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	98	4	8	0
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	98	5	7	12
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	98	7/2	0	10
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	98	8	3	13
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	90	1	8	0

Signature Global (India) Ltd.

D.T.C.P (HR)

Sidhrawali	SUNGOLD HEIGHTS AND DEVELOPERS LLP	90	2	8	0
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	90	3	8	0
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	90	4	8	0
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	90	5	7	12
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	90	6/1.	4	4
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	90	6/2.	3	8
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	90	7	8	0
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	90	8	8	0
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	90	9/1.	1	7
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	90	9/3.	5	3
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	90	9/2.	0	4
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	90	9/4.	1	6
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	90	10	8	16
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	90	12	5	2
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	90	13	10	0
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	90	14	8	0
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	91	1	8	0
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	91	2	8	0
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	91	3	8	0
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	91	4	8	0
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	91	5/2.	7	12
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	91	6	5	9
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	91	7	7	2
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	91	8	8	0
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	91	9	8	0
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	91	10	8	0
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	91	11	7	18
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	91	12	9	18
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	91	13	8	15
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	92	2/2.	5	18
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	92	3/1.	5	8
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	92	3/2.	2	0
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	92	3/3.	0	12
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	92	4	8	0
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	92	5	8	0
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	92	6	8	0
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	92	7	8	0
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	92	8/1.	3	8
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	92	8/2.	4	12
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	92	9/1.	0	8
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	92	9/2.	7	12
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	92	12/1.	7	12
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	92	12/2.	0	8
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	92	13	8	0
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	92	14/1.	1	14
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	92	15	5	7
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	92	18	6	0
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	92	19/1	4	16
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	92	19/2	3	4
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	92	20/1	7	10
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	92	22	4	15

Signatureglobal (India) LTD

D.T.C.P (HR)

Sidhrawali	SUNGOLD HEIGHTS AND DEVELOPERS LLP	65	21/2.	7	19
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	65	22	8	0
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	65	23	8	0
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	65	24	8	0
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	78	1	8	0
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	78	2	8	0
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	78	3	8	0
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	78	4/1.	7	0
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	78	7/2.	2	0
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	78	8	8	0
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	78	9	8	0
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	78	10	8	0
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	78	11	8	0
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	78	12	8	0
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	78	13	8	0
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	78	14/1/1.	2	3
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	78	18/1.	4	0
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	78	19	8	0
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	78	20/1.	1	11
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	93	15/3.	2	0
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	93	16/1.	3	1
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	78	20/2min	1	5
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	78	21min	1	12
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	89	1 min	1	12
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	89	10/1 min	0	12
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	89	10/2 min	0	19
	SUNGOLD HEIGHTS AND DEVELOPERS LLP	89	11/1 min	0	8
				1037	5
				AREA 129.65625 ACRES	

Director
Town & Country Planning
Haryana

Annexure-IV

TION -CUM-ZONING PLAN OF OF AFFORDABLE PLOTTED COLONY (UNDER DDJAY)
RIAL PLOTS FALLING IN THE INDUSTRIAL PLOTTED COLONY ON AN AREA
G 126.65625 ACRES (LICENSE NO -104 OF 2024 DATED:01/08/2024) IN THE REVENUE
VILLAGE SHIDRAWALI, TEHSIL MANESAR, DISTRICT GURUGRAM, BEING
D BY SIGNATUREGLOBAL (INDIA) LTD.

URPOSE OF CODE 1.2 (xxvi) & 6.1 (1) OF THE HARYANA BUILDING CODE, 2017, AMENDED FROM TIME TO TIME.

ONING CLAUSES FOR INDUSTRIAL PLOTS

ZONING CLAUSES FOR RESIDENTIAL PLOTS(DDJAY)

1. LAND ZONE

The land shown in this zoning plan shall be utilized in accordance with the marking explained in the table below and no other manner whatsoever.

Notation	Permissible use of land on the portion of the plot marked in column 1	Type of building permissible on land marked in column 1
	Road	Road furniture at approved places
	Public open space	To be used only for landscape features.
	Residential Subsidiary Zone	Residential building
	Commercial	As per supplementary zoning plan to be approved separately for each site

2. MAXIMUM PERMISSIBLE GROUND COVERAGE, BASEMENT, FAR AND MAXIMUM PERMISSIBLE HEIGHT / INCLUDING STILT PARKING

(a) The building or buildings shall be constructed only within the portion of the site marked as buildable zone as explained above and nowhere else.
(b) The Planning parameter to be adopted is as below:-

Plot Area	Maximum Permissible Ground Coverage	Permissible Basement	Maximum Permissible Floor Area Ratio (FAR)	Maximum permissible Height (in meters)
Upto 150 square meters	75%	Single Level	200%	15.0

(c) The stilts are permitted parking purpose in residential plots of all sizes, subject to the condition that maximum permissible height of building shall not exceed 15.0 meters as per the zoning plan/ completion of plotted/ affordable plotted colony vide memo no. ATP-1535 dated 19.04.2022.

3. PERMISSIBLE NUMBER OF DWELLING UNIT ON EACH PLOT

a) No. of Dwelling unit permitted on each plot - 3 (Three).
b) Provided that in case the decision dated 23.02.2023 to allow in accordance the approved of plotted dwelling units is reversed by the competent authority and building plans/ approvals for such plotted units is allowed, the number of dwelling unit permitted on each plot shall be restored to 4 (four) dwelling units.

4. SUB DIVISION OF PLOT

Sub-division & clubbing of the plots shall not be permitted in any circumstances.

5. BUILDING SETBACK

Building other than boundary wall and gates shall be constructed only within the portion of the site marked as residential buildable zone in clause number 2 above. Balcony of a width of maximum 1.80 m in front and rear sides of a plot can be permitted within the plot. No balcony beyond the road zoning shall be permitted.

6. HEIGHT OF THE BUILDING AND PERMISSIBLE NUMBER OF STOREY

The maximum height and number of storey shall be allowed on the plot as per provisions of Haryana Building Code, 2017.

7. STILT PARKING

Stilt parking is allowed in all sizes plots. The clear height of the stilt shall be 2.40 metres from the plinth level and below the bottom of the beam. The Stilt will not be permissible for any purpose other than parking.

8. PARKING

(a) Parking shall be provided as per the provisions of Haryana Building Code, 2017, as amended from time to time.
(b) In no circumstance, the vehicle(s) belonging to the plot shall be parked outside the plot area.

9. PLINTH LEVEL

The plinth height of building shall be as per Code No. 7.3 of the Haryana Building Code, 2017.

10. BASEMENT

Single level basements within the building zone of the site shall be provided as per Code 6.8.2(ii)(a) and shall be constructed, used and maintained as per Code 7.16 of the Haryana Building Code, 2017.

11. RESTRICTION OF ACCESS FROM 45 MTS. WIDE OR MORE SECTOR ROADS AND PUBLIC OPEN SPACES

In the case of plots which abut on the 45 meters or more wide sector roads and plots which abut on public open spaces, no direct access whatsoever secondary or main shall be allowed into the plots from such roads and open spaces.

12. BOUNDARY WALL

(a) The boundary wall shall be constructed as per Code 7.5.
(b) The boundary walls in front courtyard which abut on a road or an open space shall be vertical sided according to standard design as approved by the DTCP. The boundary wall in the rear courtyard shall not be more than 1.80 meters in height.
(c) In case of corner plots, boundary walls shall be rounded off at such corner by a radius as given below:-
i) 0.5 meters Radius for plots opening on to open space.
ii) 1.0 meters Radius for plots upto 125 sq. meters.
iii) 1.50 meters Radius for plots above 125 sq. meters to 250 sq. meters.
(d) The owner/applicant if desires, is permitted to not construct boundary wall in front of plot, so that the said area can be utilized for parking.

13. GATE AND GATE POST

a) Gate and gate post shall be constructed as per approved standard design, at the position indicated on the zoning plan.
b) An additional wicket gate of standard design not exceeding 1.25 meter width may be allowed in the front and side boundary wall provided further that no gate shall be allowed in the rear boundary wall or towards the sector road and public open space.

14. DISPLAY OF POSTAL NUMBER OF THE PLOT

The premises number and postal address shall be written at the space shown for this purpose on the standard design of the gate as per approved design.

15. GARBAGE COLLECTION POINT

Every plot holder shall make adequate provision for garbage collection in his own plot and make suitable arrangement for disposal at the towable collection point to be provided by the colonizer.

16. ACCESS

No plot or public building will derive an access from less than 9.00 meters wide road.

17. GENERAL

(a) That the colonizer/owner shall use only Light-Emitting Diode lamps (LED) fitting for internal lighting as well as Campus lighting.
(b) That the colonizer/owner shall strictly comply with the directions issued vide Notification No. 1913/2016/SP dated 31.03.2016 issued by Haryana Government, Renewable Energy Department, if applicable.
(c) That the colonizer/owner shall ensure the installation of Solar Photovoltaic Power Plant as per the provisions of order No. 22/52/2005-5Power dated 21.08.2014 issued by Haryana Government Renewable Energy Department, if applicable.
(d) Fire safety protection measures shall be regulated by Haryana fire service Act, 2009 as amended from time to time.
(e) Rain water harvesting shall be provided as per HBC-2017 (if applicable).

TO JAIPUR

TO DELHI

60.0 M WIDE GREEN BELT

45.0 M ROAD WIDENING

60.0 M WIDE ROAD (NH-48)

45.0 M PROPOSED ROAD WIDENING

60.0 M WIDE GREEN BELT

24.0M WIDE ROAD

18.0M WIDE ROAD

9.0M WIDE ROAD

COMMERCIAL
1.903 ACRES
7701.990 SQM

COMMUNITY SITE- 2
2.049 ACRES
10291.027 SQM

SS

IF1 IF2 IF3 IF4 IF5 IF7

IE1 IE2 IE3

IJ1

IC1/i IC1/ii IC1/iii IC1/iv IC1/v

ID1 ID2 ID3 ID4 ID5 ID6

IC2 IC3

IB1/i IB1/ii IB1/iii IB1/iv IB1/v IB1/vi IB1/vii IB1/viii IB1/ix IB2

UD1 UD2 UD3 UD4

IG

U1 U2

DETAIL OF RESIDENTIAL PLOTS

	TYPE-A	TYPE-B	TYPE-B1	TYPE-C
	149.85 sqmt (A1 TO A395) (395 Nos Plots)	125.10 sqmt (B1 TO B274) (274 Nos Plots)	130.5 sqmt (B1-61 TO B1-82) (22 Nos Plots)	108.0 sqmt (C1 TO C85) (85 Nos Plots)
	9 x 16.65	9 x 13.9	9 x 14.5	8 x 13.5
	FRONT	FRONT	FRONT	FRONT

(SANDEEP KUMAR) ATP (HQ)

(SANJAY NARANG) DTP(HQ)

(VIJENDER SINGH) STP(HQ)

(JITENDER SIHAG) CTP(HR)

(AMIT KHATRI, IAS) DTCP(HR)

Annexure-V

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EXTRAORDINARY

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हरियाणा सरकार

नगर तथा ग्राम आयोजना विभाग

तथा

शहरी स्थानीय निकाय विभाग

अधिसूचना

दिनांक 3 जून, 2020

संख्या सी.सी.पी. (एन.सी.आर.)/डी.डी.पी./उकलाना/2020/498 .–पंजाब अनुसूचित सड़क तथा नियन्त्रित क्षेत्र अनियमित विकास निर्बन्धन अधिनियम, 1963 (1963 का पंजाब अधिनियम 41), की धारा 5 की उपधारा (4) तथा हरियाणा नगरपालिका अधिनियम, 1973 (1973 का 24), की धारा 203 ग की उप–धारा (5) द्वारा प्रदत शक्तियों का प्रयोग करते हुए, हरियाणा के राज्यपाल, इसके द्वारा, अनुबन्ध ख में विनिर्दिष्ट नियंत्रित क्षेत्र को लागू की जाने प्रस्तावित और अनुबन्ध क तथा ख में दिए गए निर्बन्धनों तथा शर्तों सहित उकलाना के लिए निम्नलिखित प्रारूप विकास योजना–2031 इस्वी को प्रकाशित करवाने का प्रस्ताव करते हैं।

इसके द्वारा, नोटिस दिया जाता है कि इस अधिसूचना के राजपत्र में प्रकाशन की तिथि से तीस दिन की अवधि की समाप्ति पर अथवा इसके पश्चात् सरकार, प्रारूप पर, ऐसे आक्षेपों तथा सुझावों, यदि कोई हो, सहित जो निदेशक, नगर तथा ग्राम आयोजना विभाग, हरियाणा, नगर योजना भवन, ब्लॉक ए, प्लाट संख्या 3, सेक्टर 18, मध्यमार्ग, चण्डीगढ़ के नाम, (नगरपालिका की सीमाओं के बाहर आने वाले क्षेत्र के लिए) तथा निदेशक, शहरी स्थानीय निकाय विभाग, हरियाणा, बेज संख्या 11–14, सैक्टर 4, पंचकूला, (नगरपालिका की सीमाओं के भीतर आने वाले क्षेत्र के लिए) किसी व्यक्ति से उक्त प्रारूप विकास योजना के संबंध में इस प्रकार विनिर्दिष्ट अवधि की समाप्ति से पूर्व प्राप्त किये जाएं, विचार करेगी।

ड्राईंग

1. विद्यमान भूमि उपयोग योजना ड्राईंग संख्या डीटीपी (एच)3550/2011, दिनांक 23 फरवरी, 2011
2. प्रारूप विकास योजना 2031 ईस्वी उकलाना ड्राईंग संख्या डीटीपी(एच)–3652/2017, दिनांक 26 जुलाई, 2017, 28 अगस्त, 2018/5 जुलाई 2019.

अनुबंध 'क'

नियन्त्रित क्षेत्र उकलाना के लिये प्रारूप विकास योजना–2031 ईस्वी पर व्याख्यात्मक टिप्पण।

I परिचयः–

ऐतिहासिक रूप से उकलाना के बारे में अधिक जानकारी नहीं मिलती। उकलाना मण्डी के आसपास के इलाकों के थेह (टिल्लों) की खुदाई से पता चलता है कि यह क्षेत्र हड़प्पा संस्कृति से सम्बन्धित है। यह क्षेत्र पुरानी वैदिक संस्कृति जनजातियों जैसे भरत, पुरू कुरू, मुजवत्स इत्यादि से भी जुड़ा हुआ है। मध्यकाल के दौरान यह क्षेत्र मुगल साम्राज्य के अधीन भी रहा और इस क्षेत्र ने अनेक उतार–चढ़ाव देखे हैं। मुगलकाल के बाद अंग्रेजी हुकुमत में उकलाना मण्डी धीरे–धीरे विकसित होने लगी और 1947 में भारत की स्वतन्त्रता तक उकलाना अंग्रेजी हुकुमत के अधीन रहा। नगर का आकृति–विज्ञान तंग गलियों, पुरानी ईंटों, मस्जिद तथा स्थानीय गढ़ढों जो तालाबों का आकार ले चुके हैं, से चिह्नित है।

II **अवस्थिति तथा स्वरूपः**

उकलाना 29^0-31'उतरी अक्षांश तथा 75^0-52' पूर्वी देशान्तर पर समुद्र तल से 221 मीटर उंचाई पर अवस्थित है। उकलाना इसके जिले के मुख्य शहर हिसार के उत्तर में 50 किलोमीटर की दूरी पर हिसार–जाखल रेलवे लाईन तथा सिरसा–चण्डीगढ़ सड़क पर स्थित एक पुराना नगर है। उकलाना जिला हिसार की उप–तहसील है। यह सड़कों द्वारा सीधे नजदीकी गावों और अन्य कस्बों जैसे भूना, टोहाना, नरवाना तथा बरवाला से भी जुड़ा हुआ है।

III **जलवायुः**

उकलाना नगर अर्ध–शुष्क जलवायु वाले क्षेत्र में अवस्थित है। साधारणतया जुलाई से सितम्बर मास के बीच दक्षिणी–पश्चिम ग्रीष्म मानसून हवाओं से वर्षा होती है। उसके बाद का मौसम पश्चिमी दबाव के कारण कभी–कभी कुछ बौछारों को छोड़कर मौसम मुख्यतया खुश्क रहता है। ग्रीष्मकाल में इस भू–भाग की विशेषता है कि यहां प्रायः धूल भरी आंधियां चलती हैं तथा सर्दियों में जनवरी मास में जमने वाला पाला पड़ता है।

IV **जनसंख्या वृद्धिः**

प्रत्येक दशक में नगर की जनसंख्या विशेष परिवर्तन से बढ़ रही है, क्योंकि कुछ गांव जैसे बुढ़ाखेड़ा, सुरेवाला, मुगलपुरा, प्रभुवाला तथा भेरी अकबरपुर शहर का ही हिस्सा बन चुके हैं। तालिका–1 नगर की जनसंख्या की वृद्धि की प्रवृति को दर्शाती है।

तालिका 1 जनसंख्या वृद्धि

वर्ष	जनसंख्या	
1971	14832	
1981	17533	
1991	23104	
2001	29274	
2011	34974	
2021	54209	अनुमानित जनसंख्या
2031	98974	अनुमानित जनसंख्या
	अर्थात् 99000	

यद्यपि, तालिका–I दर्शाती है कि 1971 के बाद नगर की जनसंख्या में विशेष वृद्धि हुई है, 1981–91 में नगर की जनसंख्या 17533 से बढ़कर 23104 व्यक्ति हो गई जो कि 31.77 प्रतिशत वृद्धि है । पिछले चार दशकों में जनसंख्या में हुई औसत वृद्धि को ध्यान में रखते हुए 2031 इस्वी तक नगर को 99000 व्यक्तियों के लिये नियोजित किया गया है ।

V **वर्तमान मूलभूत सुविधाओं का अध्ययनः**

(i) **कृषि तथा समवर्गीः**
चूंकि, उकलाना एक उपजाऊ भूमि का भाग है, इसलिए इसकी अर्थव्यवस्था व्यापार तथा वाणिज्यिक तथा अन्य सेवाओं पर निर्भर करती है। आने वाले वर्षों में उकलाना की अर्थव्यवस्था के समर्थन में व्यापार तथा वाणिज्य महत्वपूर्ण भाग लेगा। खाद्यान्नों के भण्डारण के लिए भारतीय खाद्य निगम द्वारा गोदाम पहले ही बनाए हुए हैं।

(ii) **उद्योगः**
1981 में उद्योगों में कुल श्रमिकों का केवल 2.5 प्रतिशत है, अधिकतर औद्योगिक स्थापनाएं कृषि आधारित हैं जैसे चावल–शैलर, कपास की ओटाई तथा आटा चक्कियां इत्यादि।

(iii) **शैक्षणिक तथा चिकित्सा संस्थाऐं:**
शिक्षा सुविधाओं में एक राजकीय कन्या डिग्री महाविद्यालय, लड़कों तथा लड़कियों के लिए दो वरिष्ठ माध्यमिक विद्यालय, एक माध्यमिक, चार प्राथमिक पाठशालाऐं है। उपरोक्त के अतिरिक्त एक बहुतकनीकि संस्थान तथा 10 विद्यालय निजी संगठनों द्वारा चलाए जा रहे हैं। चिकित्सा संबंधी सुविधाओं में शहर तथा इसके आस–पास के गांवों में 30 बिस्तरों का एक सिविल अस्पताल, दो औषधालय तथा दस नर्सिंग होम हैं।

(iv) **सामुदायिक सुविधाएं:**
उकलाना की जनसंख्या की आवश्यकताओं की पूर्ति हेतु जनसाधारण के लिए दो धर्मशालाएं हैं तथा लगभग एक एकड़ का एक पार्क विद्यमान है।

(v) **जल आपूर्ति तथा निकासः**
जल आपूर्ति का मुख्य स्त्रोत नहर पर आधारित है। कुछ क्षेत्र को छोड़कर भूमिगत जल खारा है। उकलाना में जनस्वास्थ्य विभाग द्वारा दो जलघरों का निर्माण किया गया है तथा साथ लगते गांव में अलग से जलघर बनाए हुए हैं। उकलाना के 75 प्रतिशत क्षेत्र में सीवरेज बिछाई जा चुकी है, नगर में कोई मलजल शोधन यन्त्र नहीं है। मलजल खुले खेतों में छोड़ा जाता है। सार्वजनिक शौचालय, पेशाबघर, कूड़ादान उचित ढंग से उपलब्ध नहीं करवाए गए हैं। नगर में जल–निकास प्रणाली का अभाव है। जिसके परिणामस्वरूप वर्षा ऋतु के दौरान पानी तालाबों में इकठ्ठा हो जाता है।

Signatureglobal (India) Ltd.

(vi) **रेलवे:**
जिस प्रकार उकलाना सड़कों से जुड़ा हुआ है, उसी प्रकार नजदीकी शहरी क्षेत्रों से रेलमार्ग द्वारा भी जुड़ा हुआ है। यहां पर बड़ी रेलवे लाईन जो इसे टोहाना, जाखल, संगरूर, लुधियाना, बरवाला तथा हिसार से जोड़ती है।

(vii) **विद्युत उपलब्धता:**
वर्तमान में गांव बुढ़ाखेड़ा में 132 के वी का सब–स्टेशन है।

भूमि उपयोग प्रस्तावनायें :

नगर की विभिन्न सामाजिक–आर्थिक गतिविधियों की आवश्यकता को पूरा करने के लिए सम्पूर्ण नगर की प्रवृति और काम करने, रहने तथा मनोरंजन स्थानों के आपस में सम्बंध के मद्देनजर विभिन्न उपयोगों हेतु अनुपातिक रूप से भूमि आबंटितकी गई है। 68.5 प्रतिशत की औसत जनसंख्या वृद्वि दर को मानकर 2031 ईस्वी तक उकलाना नगर की जनसंख्या 99 हजार व्यक्तियों की होगी।

भूमि उपयोग प्रस्ताव

क्रम संख्या	भूमि उपयोग प्रवर्ग	नगरपालिका समिति के अन्दर पड़ने वाला क्षेत्र (हैक्टैयर में)	कुल क्षेत्र (हैक्टैयर में)	प्रतिशतता
1	**आवासीय**	41.91	491.00	49.30
2	**वाणिज्यिक**	25.82	53.00	5.32
3	**औद्योगिक**	22.76	82.00	8.25
4	**परिवहन एवं संचार**	2.98	140.00	14.05
5	**जन सुविधाएं**	19.70	51.00	5.12
6	**सार्वजनिक तथा अर्ध – सार्वजनिक**	–	88.00	8.83
7	**खुले स्थान**	8.35	91.00	9.13
	कुल नगरयोग्य क्षेत्रफल (प्रस्तावित क्षेत्र + विद्यमान नगर)		996.00	100

टिप्पण: विद्यमान शहर का क्षेत्रफल 235 हैक्टेयर है। जो आवासीय प्रयोजन में शामिल है।

भूमि उपयोगों का वर्णन

1. रिहायशी अचंल:

आवासीय उपयोग के लिए कुल आबंटित क्षेत्र 250 व्यक्ति प्रति हैक्टेयर की सघनता मानते हुए 256.00 हैक्टेयर क्षेत्र है इसमें वर्तमान नगर का क्षेत्र तथा नियन्त्रित क्षेत्र शामिल है। इस भूमि उपयोग के लिए डिजाइन किए गए सेक्टरों में सेक्टर 2 (भाग), 3 (भाग), 4 (भाग), 7 तथा 8 तथा विद्यमान सेक्टर–1, 4(भाग), 6(भाग) व 7 (भाग) हैं। विकास योजना में निम्नलिखित प्रावधान किए गए हैं, और व्याख्यात्मक नोट में निम्नानुसार दिए गए हैं:–

क. पहले से नियोजित/विकसित आवासीय सेक्टरों के अतिरिक्त जनसंख्या की आवश्कताओं को पूरा करने हेतु अवसंरचना के लिए अतिरिक्त क्षेत्र उपलब्ध करवाया जाएगा।

ख. रिहायशी कालोनी/सेक्टर में सड़क की चौड़ाई 12 मीटर से कम नहीं होनी चाहिए।

ग. रिहायशी कालोनी/सेक्टरों में पार्क/खुले स्थानों के लिए न्यूनतम क्षेत्र इस रीति में योजनाबद्ध किया जाएगा कि यह 2.5 वर्ग मीटर के न्यूनतम मानदन्डों को पूरा करेगा।

घ. दोनों ओर 20 प्रतिशत की विभिन्नता सहित प्रत्येक रिहायशी सेक्टर ड्राईंग में दर्शाई गई सेक्टर सघनता तथा इसके अतिरिक्त नई एकीकृत अनुज्ञापन पॉलिसी, दीन दयाल जन आवास पॉलिसी तथा अफोर्डऐबल ग्रुप हाऊसिंग पॉलिसी में यथा विहित सघनता में विकसित किया जाएगा। 20 प्रतिशत ग्रुप हाऊसिंग कम्पोनन्ट पॉलिसी रिहायशी सैक्टर में भी लागू होगी।

2. वाणिज्यिक:

उकलाना में हरियाणा राज्य कृषि विपणन बोर्ड द्वारा सेक्टर 3 (भाग) में उकलाना–नरवाना सड़क के साथ–साथ 25.82 हैक्टेयर में अनाज मण्डी विकसित की गई है। परचून व्यापार पुरानी तंग गलियों में रिब्बन विकास के रूप में केन्द्रित है। भविष्य की आवश्यकता को पूरा करने के लिए वाणिज्यिक उपयोग हेतुसेक्टर 3 में 16.69 हैक्टैयर भूमि प्रस्तावित की गई है।

3. औद्योगिक अचंल:

उद्योगों की स्थापना हेतु उत्तर की ओर वी–2 सड़क के साथ सेक्टर 4 भाग 5 में औद्योगिक उपयोग के लिए 82.00 हैक्टेयर भूमि प्रस्तावित की गई है। वर्तमान औद्योगिक विकास के रूझान के आधार पर भूमि आबंटित की गई है।

4. परिवहन तथा संचार:

सेक्टर–4 (भाग) में 22 हैक्टेयर भूमि सड़क, परिवहन डिपो और पार्किंग क्षेत्र के लिए प्रस्तावित की गई है। ग्रिड आयरन पद्धति पर आधारित मुख्य सड़क पद्धति वर्तमान सड़क पद्धति में सही बैठती है । भूना–नरवाना सड़क तथा सुरेवाला चौक से टोहाना अनुसूचित सड़क है। इन सड़कों के साथ कोई भी निर्माण/खुदाई, किसी भी रूप में नगरीयकरण सीमा में दोनों ओर 30 मीटर के भीतर अनुमत नहीं किया जाएगा। एक परिधीय सड़क (वी–2) सैक्टर–2, 3, 4, 5, 6, 7 तथा 8 की

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बाहरी सीमाओं के साथ 45 मीटर चौड़ी तथा बाहरी तरफ 30 मीटर हरित पट्टी के साथ प्रस्तावित की गई है। विभिन्न सड़कों के लिए विहित चौड़ाई निम्नानुसार दी गई है:

क्रम संख्या	प्रकार	नाम	भूमि आरक्षण
(i)	(वी–1)	हिसार–अम्बाला सड़क (राष्ट्रीय राजमार्ग संख्या–52)	वर्तमान चौड़ाई, दोनों और 30 मीटर चौड़ी हरित पट्टी के साथ नगरपालिका की सीमा से बाहर।
(ii)	(वी–1ए)	अधिसूचित सड़क (भूना–नरवाना)	वर्तमान चौड़ाई दोनों और 30 मीटर चौड़ी हरित पट्टी के साथ नगरपालिका की सीमा से बाहर।
(iii)	(वी–1–बी)	सूरेवाला चौक से टोहाना सड़क। (राष्ट्रीय राजमार्ग संख्या–148 बी)	वर्तमान चौड़ाई, दोनों और 30 मीटर चौड़ी हरित पट्टी के साथ नगरपालिका की सीमा से बाहर।
(iv)	(वी–2)	परिधीय सड़क	45 मीटर चौड़ी बाहरीं ओर 30 मीटर चौड़ी हरित पटटी के साथ ।
(v)	(वी–3)	सेक्टर सड़क	45 मीटर चौड़ी ।
(vi)	(वी–4)	वर्तमान/गांव सम्पर्क सड़क	वर्तमान चौडाई।

5. जन उपयोगिताएं:

इस उपयोग में जल–आपूर्ति संस्थापनायें, निकास कार्य, बिजली उपकेन्द्र इत्यादि को समायोजित किया जायेगा। इस अंचल के अधीन कुल क्षेत्र 51 हैक्टेयर है। उकलाना में 3.2 हैक्टर में दो जलघर पहले ही विद्यमान है। वांछित जल–आपूर्ति की मांग को पूरा करने के लिए 8 हैक्टेयर का एक वाटर वर्कस सैक्टर–6 में नियत किया गया है। मलजल शोधन संयंत्र तथा ठोस अपशिष्ट निपटान हेतु लगभग 8.25 हैक्टेयर भूमि कृषि अंचल में आरिक्षत की गई है। शहर की अनुमानित जनसंख्या के लिए उकलाना माईनर से पीने का पानी उपलब्ध करवाया जाएगा।

6. सार्वजनिक तथा अर्धसार्वजनिक उपयोग:

सेक्टर 2 भाग तथा 3 भाग में इस उपयोग के लिए 88 हैक्टेयर क्षेत्र नियत किया गया है तथा सरकारी महाविद्याालय का निर्माण किया जा चुका है तथा वरिष्ठ माध्यमिक विद्यालय (आरोही) इस समय कार्यशील है।

7. पार्क तथा खुले स्थान:

लगभग 21.50 हैक्टेयर का क्षेत्र पार्क सेक्टर–2 में वर्तमान आबादी के साथ तथा लगभग 20 हैक्टेयर क्षेत्र परिधीय सड़क के साथ सेक्टर–6 में अन्य पार्क के लिए प्रस्तावित किया गया है। खुले स्थान/हरित पट्टी के अधीन कुल 91 हैक्टेयर क्षेत्र प्रस्तावित किया गया है। विद्यमान शहर में 2 से 3 तालाब विद्यमान है जिसका मुख्य कोड 760 है।

8. कृषि अंचल :

शहरीकरण प्रस्तावों के आसपास बाकी का क्षेत्र जो कि प्रमुख रुप से कृषि योग्य है, कृषि अंचल के रुप में आरक्षित किया जाना प्रस्तावित है। तथापि, कृषि अंचल इस क्षेत्र में अनिवार्य भवन कार्यकलापों को नहीं रोकेगा जैसे कि आबादी–देह से संलग्न मौजूदा गांव का विस्तार यदि इस ग्रामीण क्षेत्र के रख–रखाव तथा सुधार के लिए सहायक आवश्यक सुविधाओं तथा सरकार द्वारा अनुमोदित या प्रायोजित परियोजना के अधीन लिया गया है।

9. अंचल विनियम :

भूमि उपयोग के संबंध में प्रस्ताव के लिए विधिक सन्तता अंचल विनियमों के सैट द्वारा प्रभावी की जा रही है जो इस विकास योजना का भाग बनती है। ये विनियम भूमि उपयोग परिवर्तन तथा विकास के मानकों से शासित होंगे। वे सहबद्ध तथा सहायक उपयोगों को विस्तृत रुप से निर्दिष्ट भी करते हैं जो विभिन्न मुख्य उपयोगों में अनुमत होंगे तथा नियतन करेंगे कि भूमि उपयोग के सभी परिवर्तन तथा विकास सेक्टर योजना में दर्शाए गए अनुसार होगा जिससे विकास के मार्गदर्शन के लिए प्रत्येक सेक्टर हेतु विस्तृत सेक्टर योजनाओं की तैयारी तथा उचित नियन्त्रण लागूकरण सुनिश्चित करेगा।

अनुबन्ध–ख

अंचल विनिमय:

प्रारूप विकास योजना ड्राईंग संख्या डीटीपी(एच)–3652/2017, दिनांक 26 जुलाई, 2017/ 28 अगस्त 2018/ 5 जुलाई, 2019 में दर्शाए अनुसार उकलाना के नियंत्रित क्षेत्रों में भूमि के उपयोग तथा विकास को शासित करना।

I सामान्य

1. उकलाना के इर्दगिर्द नियंत्रित क्षेत्रों के लिए प्रारूप विकास योजना का भाग रूप बनने वाले इन अंचल विनियमों को नियंत्रित क्षेत्र उकलाना के लिए प्रारूप विकास योजना के अंचल विनियम कहा जायेगा।

2. इन विनियमों की अपेक्षाएं, प्रारूप विकास योजना में शामिल समूचे क्षेत्र की सीमा तक होंगी तथा हरियाणा नगरपालिका अधिनियम, 1973 (1973 का 24) तथा पंजाब अनुसूचित सड़क तथा नियंत्रित क्षेत्र अनियमित विकास निर्बन्धन अधिनियम, 1963 (1963 का पंजाब अधिनियम 41) और उसके अधीन बनाये गये नियमों की अपेक्षाओं के अतिरिक्त होंगी।

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II परिभाषायें :

इन विनियमों में,–

(क) **'कृषि आधारित उद्योग'** से अभिप्राय है, ऐसी औद्योगिक इकाई, जो खाद्यान्न, फलों या कृषि अपशिष्ट का उपयोग कच्चे माल के रूप में करती है;

(ख) **'अनुमोदित'** से अभिप्राय है, सक्षम प्राधिकारी द्वारा अनुमोदित;

(ग) **'भवन संहिता'** से अभिप्राय है, हरियाणा भवन संहिता, 2017;

(घ) **'भवन नियमों'** से अभिप्राय है, नियमों के भाग–VII में अन्तर्विष्ट नियम;

(ड.) **'साईबर सिटी'** से अभिप्राय है, केन्द्रकीय सूचना/प्रौद्योगिकी परिकल्पना के लिए विकसित और कम्पनियों/सूचना प्रौद्योगिकी आधारित सेवाओं के मध्यम तथा बड़े साफ्टवेयर उत्पन्न किए जाने के लिए अति उच्चतम गुणवत्ता का मूलभूत ढांचा, उत्तम परिस्थितियां और उच्च गति संचार से आत्मनिर्भर परिपूर्ण शहर, जहां विनिर्माण ईकाईयों को अनुमत नहीं किया जाएगा;

(च) **'साईबर पार्क/सूचना प्रौद्योगिकी पार्क'** से अभिप्राय है, वह क्षेत्र जो केवल साफ्टवेयर विकास सम्बन्धी क्रिया कलापों का पता लगाने तथा सूचना प्रोद्योगिकी को समर्थ बनाने वाली सेवाओं के लिए विकसित हों, इसमें किसी भी प्रकार के विनिर्माण (असैम्बलिंग क्रियाकलापों सहित) की अनुमति प्रदान नहीं की जाएगी।

(छ) **'ड्राईंग'**से अभिप्राय है, ड्राईंग संख्या डीटीपी(एच)–3652/2017, दिनांक 26 जुलाई, 2017/ 28 अगस्त, 2018/ 5 जुलाई 2019;

(ज) **'व्यापक उद्योग'** से अभिप्राय है, ऐसा उद्योग, जो सरकार की अनुमति से स्थापित किया जाये और जो व्यापक हो, जिसमें 100 से अधिक कामगार नियुक्त हों तथा जिसमें ईंधन चालित शक्ति का प्रयोग किया जाये बशर्ते कि इसमें किसी प्रकार के हानिकारक तत्व न हों;

(झ) **"फार्म गृह"** से अभिप्राय है, किसी फार्म के स्वामी द्वारा अपनी भूमि पर निम्नलिखित प्रयोजनार्थ निर्मित घर है–

(i) निवास यूनिट अर्थात् मुख्य उपयोग;
(ii) फार्म छायाबान अर्थात् गौण उपयोग।

टिप्पण:–

(1) फार्म गृह का निर्माण 'कृषि अंचल में आबादी देह से बाहर फार्म गृहों की व्यवस्था' संबंधी खण्ड XIX के अधीन दिये गये निर्बन्धनों से शासित होगा;

(2) 'फार्म शैड' 'भवन नियंत्रण और स्थल विशिष्टियां', के सम्बन्ध में खंड XIX में उल्लेखित निर्बन्धनों द्वारा शासित होंगे।

(ञ) **"फर्श क्षेत्र अनुपात"** से अभिप्राय है, सभी मंजिलों के कुल आच्छादित क्षेत्र तथा सौ के गुणक को प्लाट क्षेत्र से विभाजित करते हुए प्राप्त किया गया भागफल, अर्थात् :–

$$\text{फर्श क्षेत्र अनुपात} = \frac{\text{कुल आच्छादित क्षेत्र}}{\text{प्लाट क्षेत्र}} \times 100$$

फर्श क्षेत्र अनुपात की गणना के प्रयोजन के लिए, कैंटिलीवर अनुमत छत प्रोजेक्शनो; लिफ्ट कमरा, ममटी, छज्जा, तहखाना या कोई फर्श यदि पार्किंग, सेवाओं और भंडारण, केवल पार्किंग/पैदल यात्री प्लाजा के लिए उपयोग हेतु प्रस्तावित स्टिलट क्षेत्र, (खुला), खुली सीढ़ी (ममटी के बिना), पहुँच के साथ या के बिना, छत अग्नि सीढ़ी, अलिंद पानी की टंकी, अनुमत आकार के खुला आंगन के लिये उपयोग किया गया हैं, फर्श क्षेत्र अनुपात में गिना नहीं जाएगा:

परंतु स्टिलट से अगली मंजिल तक शाफ्ट, शूटस, लिफ्ट वैल तथा सीढ़ी के अधीन क्षेत्र, भूमि तल से फर्श क्षेत्र अनुपात केवल एक बार गिना जाएगा:

परंतु यह और कि यदि वेंटिलेशन शाफ्ट क्षेत्र 3 वर्ग मीटर से अधिक है, तो यह फर्श क्षेत्र अनुपात में नहीं गिना जाएगा;

(ट) **'ईंधन स्टेशन'** से अभिप्राय है, ईंधन भरने वाला स्टेशन जो ऑटोमोबाइल के लिए ईंधन की खुदरा आपूर्ति प्रदान करता है, जिसमें पेट्रोल पम्प, सीएनजी स्टेशन, जैव–ईंधन, चार्जिंग स्टेशन, बैटरी उपलब्ध स्टेशन आदि शामिल हैं;

(ठ) **'हरित पट्टी'** से अभिप्राय है, विकास योजना में दर्शाए गए सेक्टर/परिधि सड़कों के साथ–साथ की भू– पट्टी जो भविष्य में सड़क की चौड़ा करने के लिए उपयोग हो; तथा

(ङ) **'वर्ग आवास'** से अभिप्राय है, रिहायशी प्रयोजन के लिए फ्लैटों के रूप में डिजाईन तथा विकसित किये गये भवन या वर्ग आवास का अनुषंगी कोई भवन;

(ढ) **'भारी उद्योग'** से अभिप्राय है, सरकार की अनुमति से सार्वजनिक या अर्ध–सार्वजनिक या निजी क्षेत्र में स्थापित किया गया उद्योग (प्लान्ट, मशीनरी इत्यादि की लागत जैसे कि सरकार की उद्योग नीति में परिभाषित हो);

(ण) **'सूचना प्रौद्योगिकी औद्योगिक ईकाई'** से अभिप्राय है, हरियाणा सरकार की सूचना प्रौद्योगिकी नीति, 2000 के अनुबन्ध में तथा इस अधिसूचना के परिशिष्ट–1 में शामिल उद्योगों की श्रेणियां तथा/ अथवा जो हरियाणा सरकार द्वारा, समय–समय पर परिभाषित की जायें;

(त) **'टांड या पुश्तवान'** से अभिप्राय है, कमरे के अन्दर बनाए गए अनुलम्ब खम्भे को छोड़कर, किसी भी स्वरूप की शैल्फ जैसे बहिर्गत भाग, बशर्ते जिसका बर्हिगत भाग एक मीटर से अधिक चौड़ा न हो।

(थ) **'हल्के उद्योग'** से अभिप्राय है, ऐसा उद्योग जिसके कारण हानिकारक या घृणाजनक शोर, धुआं, गैस, भॉप गन्ध, धूल, बहि:स्राव और कोई अन्य अत्यधिक डिग्री का प्रदूषण न हो और बिजली द्वारा चालित हों;

(द) **'स्थानीय सेवा उद्योग'** से अभिप्राय है, ऐसा उद्योग जिसका विनिर्मित माल और उत्पादन प्राय: स्थानीय क्षेत्र के भीतर उपभोग किया जाता हो, उदाहरणार्थ बेकरियां, आईसक्रीम विनिर्माण, वातित जल, बिजली से चलने वाली आटे की चक्कियां, लॉंड्री, ड्राईक्लीनिंग और रंगाई, स्वचालित गाड़ियों, स्कूटर तथा साईकलों की मरम्मत तथा सर्विस, घरेलू बर्तनों की मरम्मत, जूते बनाना और उनकी मरम्मत, ईंधन डिपो आदि बशर्ते कि उनमें किसी ठोस ईंधन का प्रयोग न किया जाता हो;

(ध) **'अटारी'**से अभिप्राय है, अधिकतम 1.5 मीटर की ऊँचाई सहित अवशिष्ट स्थल पर दो मंजिलों के बीच का मध्यवर्ती स्थल तथा जो केवल भंडारण प्रयोजन हेतु निर्मित की गई है अथवा अपनाई गई है;

(न) **'वास्तविक तिथि'** से अभिप्राय है, नीचे घोषित किए गए विभिन्न नियंत्रित क्षेत्रों की अधिसूचना के प्रकाशन की तिथि;

क्रम संख्या	नियंत्रित क्षेत्र का नाम तथा अधिसूचना संख्या	वास्तविक तिथि
1	दिनांक 7 अक्तूबर, 2009 को प्रकाशित हरियाणा सरकार राजपत्र अधिसूचना संख्या सीसीपी (एनसीआर) एचएसआर/उकलाना/सीए/2009/2714, दिनांक 07–10–2009 द्वारा अधिसूचित नियंत्रित क्षेत्र।	7 अक्तूबर, 2009

(प) **'मध्यम उद्योग'** से अभिप्राय है, हल्का उद्योग तथा स्थानीय सेवा उद्योग के अलावा सभी उद्योग और जो घृणाजनक और खतरनाक गंध तथा दुर्गन्ध न फैलाते हों;

(फ) **'परछती तल'** से अभिप्राय है, निम्न मंजिल का 1/2 (आधा) तक के सीमित क्षेत्र सहित तथा न्यूनतम ऊँचाई 2.3 मीटर सहित दो मंजिलों के बीच कोई मध्यवर्ती तल और ऊपरी तल स्तर से 2.3 मीटर (स्पष्ट ऊँचाई) से कम नहीं होगा;

(ब) नियंत्रित क्षेत्र में किसी भूमि अथवा भवन के संबंध में **'अननुरूप उपयोग'** से अभिप्राय है, ऐसी भूमि अथवा भवन जो विकास योजना में क्षेत्र के उस भाग के लिए विनिर्दिष्ट मुख्य भूमि उपयोग के विपरीत हो;

(भ) **'घृणाजनक या परिसंकटमय उद्योग'** से अभिप्राय है सरकार की अनुमति से स्थापित किया गया उद्योग और जिसमें अत्यधिक पूंजी लगी हो। जिसमें अत्यधिक धुंआ, शोर, स्पन्दन, दुर्गन्ध, अप्रिय या हानिकारक बहि:स्राव, विस्फोटक, ज्वलनशील सामग्री इत्यादि और समुदाय के स्वास्थ्य और सुरक्षा के लिए अन्य खतरनाक तत्व शामिल हों;

(म) **'सार्वजनिक उपयोगिता सेवा भवन'** से अभिप्राय है, ऐसा भवन जो सार्वजनिक उपयोगिता सेवाओं को चलाने के लिए अपेक्षित हो, जैसे जल–सप्लाई, जल–निकास, बिजली, डाक तथा तार तथा परिवहन तथा दमकल केन्द्र सहित कोई नगरपालिका सेवा;

(य) **'नियमों'** से अभिप्राय है, पंजाब अनुसूचित सड़क तथा नियंत्रित क्षेत्र अनियमित विकास निर्बन्धन नियम, 1965;

(य क) **सेक्टर क्षेत्र', और 'कॉलोनी क्षेत्र'** से अभिप्राय है, विकास योजना में ऐसे रूप में दर्शाये गये सेक्टर क्षेत्र या कॉलोनी क्षेत्र;

व्याख्या

(1) इस परिभाषा में 'सेक्टर क्षेत्र' या 'कालोनी क्षेत्र' से अभिप्राय है, सेक्टर या कालोनी का क्षेत्र जो कालोनी/सेक्टर की अनुमोदित अभिन्यास योजना पर ड्राईंग में दर्शाया गया है जिसमें सेक्टर या कालोनी, जैसे भी स्थिति हो, में भवन विकास के लिए अनुपयुक्त क्षेत्र शामिल नहीं है;

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(2) मुख्य सड़कों तथा उनकी निकटवर्ती हरित पट्टी, यदि कोई हो, के अधीन आने वाले क्षेत्र का 50 प्रतिशत लाभ प्लाटिड/ग्रुप आवास कालोनी की दशा में प्लाटऐबल क्षेत्र/फर्श क्षेत्रफल अनुपात के लिए अनुज्ञात किया जायेगा;

(3) औद्योगिक कालोनी/सेक्टर से भिन्न कालोनी या सेक्टर की विन्यास योजना में, सड़कों, खुले स्थानों, विद्यालयों, सार्वजनिक तथा सामुदायिक भवन तथा अन्य सामूहिक उपयोगों के लिए आरक्षित भूमि कालोनी/सेक्टर के अधीन भूमि के कुल क्षेत्र के 45 प्रतिशत से कम नहीं होगी।

(4) सेक्टर सघनता या कालोनी सघनता की संगणना के प्रयोजनों के लिए यह माना जायेगा कि सेक्टर क्षेत्र या कालोनी क्षेत्र का 50 प्रतिशत आवासीय प्लाटों के लिए उपलब्ध होगा जिसमें ग्रुप आवास के अधीन क्षेत्र भी शामिल होगा तथा प्रत्येक भवन प्लाट औसतन प्रत्येक तीन निवास ईकाइयों में 4.5 व्यक्ति प्रति निवास ईकाई या 13.5 व्यक्ति भवन प्लाट या कालोनी/ग्रुप आवास समूह की अंचल योजना में यथा सम्मिलित होगा। यद्यपि, दुकान तथा आवासीय प्लाट के मामले में केवल एक निवास इकाई मानी जायेगी;

(5) उपरोक्त दी गई किसी बात के होते हुए भी, विनिर्दिष्ट पॉलिसी जैसे नई एकीकृत अनुज्ञापन पॉलिसी के अधीन अनुमोदित परियोजनाएं; प्लॉटऐबल क्षेत्र की बजाय फर्श क्षेत्र अनुपात तथा सघनता पैरामीटर से शासित होंगी;

(य ख) **'सेक्टर सघनता' और 'कॉलोनी सघनता'**, से अभिप्राय है, उस सेक्टर क्षेत्र तथा कॉलोनी क्षेत्र, जैसी भी स्थिति हो, में प्रति व्यक्तियों की संख्या;

(य ग) **'स्थल आच्छादन'** से अभिप्राय है, भवन के भूतल क्षेत्र और स्थल क्षेत्र द्वारा आच्छादित क्षेत्र के बीच प्रतिशतता में अभिव्यक्त अनुपात;

(य घ) **'लघु उद्योग'** से अभिप्राय है, ऐसी औद्योगिक इकाई जो उद्योग विभाग द्वारा लघु उद्योग के रूप में पंजीकृत हो;

(य ड.) **'कृषि उपयोग साधन'** से अभिप्राय है, ऐसा विकास तथा गतिविधियां, जो कृषि संबंधी कार्यों को करने में सहायक रूप में अपेक्षित है, जैसे कि नलकूप, पम्प, चैम्बर, वायु चक्की, सिंचाई, नाले, पक्के प्लेटफार्म, बाड़ लगाना तथा चारदीवारी बनाना, जल नलके आदि;

(य च) **'अधिनियम', 'कालोनी', 'उप–निवेशक', 'विकास योजना', 'सेक्टर' और 'सेक्टर योजना'** शब्दों का वही अर्थ होगा, जो उन्हेंपंजाब अनुसूचित सड़क तथा नियंत्रित क्षेत्र अनियमित विकास निर्बन्धन अधिनियम, 1963 (1963 का पंजाब अधिनियम 41) में दिया गया है;

(य छ) किन्हीं अन्य अभिव्यक्तियों का वही अर्थ होगा, जो उन्हें पंजाब अनुसूचित सड़क तथा नियंत्रित क्षेत्र अनियमित विकास निर्बन्धन अधिनियम, 1963 (1963 का पंजाब अधिनियम 41) में दिया गया है।

III. मुख्य भूमि उपयोग/अंचल

1. (i) रिहायशी अंचल
   (ii) वाणिज्यिक अंचल
   (iii) औद्योगिक अंचल
   (iv) परिवहन तथा संचार अंचल
   (v) जन उपयोगिता अंचल
   (vi) सार्वजनिक तथा अर्धसार्वजनिक अंचल (संस्थागत अंचल)
   (vii) खुले स्थान अंचल
   (viii) कृषि अंचल

2. मुख्य भूमि उपयोगों का वर्गीकरण परिशिष्ट क के अनुसार है।

IV. सेक्टरों में विभाजन

उपर्युक्त अंचल विनियमन–III में क्रम संख्या–(i) से (vii) पर वर्णित मुख्य भूमि उपयोग, जो भवन प्रयोजनार्थ भूमि उपयोग हैं, जिन्हें इन सैक्टरों की मुख्य सड़कों के आरक्षण हेतु दर्शाई गई हदबन्दी के अनुसार सैक्टरों में विभाजित किया गया है और प्रत्येक सेक्टर को ड्राईंग में दिखाये अनुसार एक निश्चित संख्या दी गई है।

V. मुख्य उपयोगों में भूमि उपयोग संबंधी ब्यौरेः–

मुख्य, सहायक तथा गौण उपयोग जो इन विनियमों तथा नियमों के अन्य अपेक्षाओं के अध्याधीन हैं, को मुख्य भूमि उपयोग अंचल में अनुमति दी जा सकती है, उनकी सूची परिशिष्ट ख पर दी गई है जो इन विनियमों के साथ जोड़े गये है।

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VI. विकास के लिए अनुपयुक्त सेक्टर:–

विभिन्न सैक्टरों में भवन परियोजनार्थ, भूमि उपयोग के लिए आरक्षण होते हुए भी, निदेशक, नियंत्रित क्षेत्र के सघन तथा किफायती विकास के दृष्टिगत अपने भूमि उपयोग में किसी प्रकार के परिवर्तन के लिए अथवा उस पर किसी भवन के निर्माण के लिए ऐसे समय तक अनुमति नहीं देगा जब तक वह अपनी संतुष्टि सुनिश्चित नहीं कर लेता है कि इन सैक्टरों के लिए जल सप्लाई, जल मल निकास व्यवस्था तथा अन्य सुविधायें, उपलब्ध नहीं हो जाती हैं।

VII. केवल सरकारी उपक्रमों के माध्यम से विकसित किये जाने वाले सैक्टर:-

सरकार अपने द्वारा या उसके अभिकरणों द्वारा, विकास के लिए कोई सेक्टर अधिसूचित कर सकती हैं, ऐसे मामले में ऐसे सेक्टरों में भूमि उपयोग के परिवर्तन या अनुज्ञप्ति प्रदान करने के लिए आगे कोई भी अनुमति अनुमत नहीं की जाएगी ।

VIII. मुख्य सड़कों के लिए भूमि आरक्षण:-

(1) ड्राईग में चिह्नित की गई मुख्य सड़कों के लिए भूमि का आरक्षण निम्न प्रकार से किया जायेगा:

क्रम संख्या	किस्म	नाम	भूमि आरक्षण
(i)	(वी–1)	हिसार–अम्बाला सड़क (राष्ट्रीय राजमार्ग संख्या–52)	वर्तमान चौड़ाई, दोनों और 30 मीटर चौड़ी हरित पट्टी के साथ नगरपालिका की सीमा से बाहर।
(ii)	(वी–1ए)	अधिसूचित सड़क (भूना–नरवाना)	वर्तमान चौड़ाई दोनों और 30 मीटर चौड़ी हरित पट्टी के साथ नगरपालिका की सीमा से बाहर
(iii)	(वी–1–बी)	सूरेवाला चौक से टोहाना सड़क।(राष्ट्रीय राजमार्ग संख्या – 148बी)	वर्तमान चौड़ाई, दोनों और 30 मीटर चौड़ी हरित पट्टी के साथ नगरपालिका की सीमा से बाहर
(iv)	(वी–2)	परिधीय सड़क	45 मीटर चौड़ी बाहरी ओर 30 मीटर चौड़ी हरित पटटी के साथ ।
(v)	(वी–3)	सेक्टर सड़क	45 मीटर चौड़ी ।
(vi)	(वी–4)	वर्तमान/गांव सम्पर्क सड़क	वर्तमान चौडाई।

(2) अन्य सड़कों की चौड़ाई और सीधाई, सैक्टर प्लान के अनुसार अथवा कालोनियों की अनुमोदित अभिविन्यास योजना के अनुसार होगी।

(3) व्यापार योग्य फर्श क्षेत्र अनुपात का लाभ विनिर्दिष्ट पॉलिसी के अनुसार सैक्टर सड़क या हरित पट्टी तथा खुला क्षेत्र अंचलों के अधीन आने वाली भूमि के लिए प्रदान की गई अनुज्ञप्तियों के लिए अनुज्ञात किया जा सकता है।

IX. अनुरूप उपयोग अर्थात् विद्यमान या भूमि उपयोग में वैध परिवर्तन की अनुमति प्राप्त:–

1. विकास योजना में औद्योगिक अंचल से भिन्न अंचलों में दर्शाए गए विद्यमान उद्योगों के संबंध में, निदेशक द्वारा निर्धारित की जाने वाली नियत अवधि, किन्तु दस वर्ष से अधिक न हों, के लिए ऐसे औद्योगिक अननुरूप उपयोग जारी रखने की अनुमति दी जाएगी; बशर्ते कि सम्बद्ध भवन का स्वामी:
   (क) निदेशक को स्थल के बाह्य विकास के लिए, उस द्वारा यथानिर्धारित अनुपातिक प्रभारों तथा जब भी निदेशक द्वारा इस निमित्त ऐसा करने के लिए कहा जाये, के भुगतान का वचन देता है;
   (ख) अंतरिम अवधि के दौरान निदेशक की संतुष्टि के अनुसार बहि:स्राव के निष्कासन की सुनिश्चित व्यवस्था करे: तथा
   (ग) अननुरूप उपयोग के क्षेत्र में विद्यमान परियोजना के विस्तार की अनुमति नहीं होगी ।
2. उन परियोजनाओं के बारे में, जिन्हें भूमि उपयोग की मान्य स्वीकृति है, तथा जो विकास योजना में अनुरूप उपयोग अंचल से भिन्न अवस्थित हैं, ऐसे अननुरूप उपयोग जारी रखने के लिए अनुमत किए जाएंगे, बशर्ते कि सम्बद्ध भवन का स्वामी,–
   (क) निदेशक को स्थल के बाह्य विकास के लिए उस द्वारा यथा निर्धारित अनुपातिक प्रभारों तथा निदेशक द्वारा इस निमित्त ऐसा करने के लिए कहा जाये, के भुगतान का वचन देता है;
   (ख) अंतरिम अवधि के दौरान निदेशक की संतुष्टि के अनुसार बहि:स्राव के लिए संतोषजनक व्यवस्था करे।

X. अननुरूप उपयोग बन्द करना:–

(1) यदि किसी भूमि का अननुरूप उपयोग दो वर्ष या इससे अधिक अवधि के लिए लगातार बन्द रहा हो, तो उसे समाप्त हुआ समझा जायेगा और केवल अनुरूप अनुमत उपयोग के अनुसार ही भूमि के पुन:उपयोग या पुन:विकास की अनुमति दी जायेगी।

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(2) यदि अननुरूप उपयोग भवन, आग, बाढ़, विस्फोट, भूकम्प, लड़ाई, दंगा या किसी अन्य प्राकृतिक आपदा से इसके पुनरूत्पादन मूल्य के 50 प्रतिशत या इससे अधिक क्षतिग्रस्त हो जाता है, तो उसे केवल अनुमत उपयोग के लिए पुनःविकसित करने की अनुमति दी जायेगी।

(3) खण्ड IX के अधीन शामिल परियोजनाओं के समाप्त होने के बाद, भूमि केवल अनुरूप उपयोग के लिए पुनः विकसित करने या उपयोग में लाने के लिए अनुमत की जायेगी।

(4) खण्ड IX (1) के अधीन नियत अवधि की समाप्ति के बाद भूमि केवल अनुरूप उपयोग के लिए पुनः विकसित या उपयोग में लाने के लिए अनुमत की जाएगी।

XI. सेक्टर योजना और आंचलिक योजना के अनुरूप विकासः

विनियम–IX में यथा उपबन्धित को छोड़कर, मुख्य भूमि उपयोग में किसी भी भूमि को भवन निर्माण प्रयोजनार्थ उपयोग तथा विकास के लिए तब तक अनुमत नहीं किया जाएगा जब तक प्रस्तावित उपयोग और विकास, सेक्टर योजना और आंचलिक योजना अथवा अनुमोदित कालोनी योजना, जिसमे भूमि अवस्थित है, में दिखाये गये ब्यौरे के अनुसार न हो।

XII. अनुमोदित अभिविन्यास या आंचलिक योजना का भाग बनने वाले विशिष्ट स्थलः

किसी प्लाट पर भवन निर्माण या पुनःनिर्माण की अनुमति तब तक नहीं दी जायेगी जब तक –

(i) प्लाट अनुमोदित कालोनी का भाग न हो या प्लाट ऐसे क्षेत्र में न हो, जिसके लिए विनियम XVII में यथा उपबन्धित अनुसार छूट दी गई है; तथा

(ii) निदेशक की संतुष्टि अनुसार प्लाट तक पहुंच के लिए सड़क की व्यवस्था न हो और सड़क न बनी हो।

XIII. विभिन्न प्रकार के भवनों के प्लाटों का न्यूनतम आकारः

(क) विभिन्न प्रकार के उपयोगों के लिए प्लाटों के न्यूनतम आकार निम्न अनुसार होंगेः–

क्रम संख्या	भूमि उपयोग	आकार		
(i)	रिहायशी प्लाट	50 वर्ग मीटर	59.8 वर्ग गज	538.20 वर्ग फीट
(ii)	सरकार द्वारा अनुमोदित आर्थिक सहायता प्राप्त औद्योगिक आवास या गन्दी बस्तियों में रहने वालों के लिए आवास स्कीम में रिहायशी प्लाट	35 वर्ग मीटर	41.86 वर्ग गज	376.74 वर्ग फीट
(iii)	दुकान एवं रिहायशी प्लाट	100 वर्ग मीटर	119.60 वर्ग गज	1076.40 वर्ग फीट
(iv)	शापिंग बूथ जिनमें सामने बरामदा या पत्थर तथा ईंट पैदल मार्ग शामिल हो	20 वर्ग मीटर	23.92 वर्ग गज	215.28 वर्ग फीट
(v)	स्थानीय सेवा उद्योग प्लाट	100 वर्ग मीटर	119.60 वर्ग गज	1076.40 वर्ग फीट
(vi)	हल्के उद्योग प्लाट	250 वर्ग मीटर	299 वर्ग गज	2691 वर्ग फीट
(vii)	मध्यम उद्योग प्लाट	8000 वर्ग मीटर	9568 वर्ग गज	86112 वर्ग फीट

(ख) रिहायशी और वाणिज्य विकास के लिये वर्ग आवास कालोनी, प्लाटिड रिहायशी कालोनी और वाणिज्य कालोनी के लिए क्षेत्र मानदण्ड समय–समय पर अधिसूचित नीतियों के अनुसार होंगें। तथापि, यदि वर्ग आवास स्कीम हरियाणा शहरी विकास प्राधिकरण या किसी अन्य सरकारी एजेंसी द्वारा जारी की जाती है, तो वर्ग आवास स्थल का आकार योजना में यथा विनिर्दिष्ट होगा।

XIV. विभिन्न प्रकार के भवनों के अन्तर्गत आच्छादित क्षेत्र, ऊँचाई और आकारः–

विशिष्ट प्लॉट/ स्थल के लिए पर अनुमत आच्छादित क्षेत्र, फर्श क्षेत्र अनुपात तथा ऊँचाई पैरामीटर, भवन संहिता/नियमों तथा/ या ऐसे प्लाट/स्थल के जोनिंग प्लान में यथा अधिकथित विहित पॉलिसी द्वारा शासित होंगे।

XV. भवनों की अगली और पिछली ओर भवन पंक्तिः–

ये भवन संहिता/नियमों के अनुसार तथा/या ऐसे क्षेत्र के जोनिंग प्लान में यथा अधिकथित उपबन्धित अनुसार होगी।

XVI. वास्तुकला संबंधी नियंत्रणः–

जहां कहीं भी वास्तुकला संबंधी नियंत्रण आवश्यक समझा जाता है, तो प्रत्येक भवन हरियाणा भवन संहिता, 2017 के खण्ड 6.4 के अधीन बनाये गए वास्तुकला संबंधी नियंत्रण के अनुरूप होगा।

XVII. कृषि अंचल में भूमि उपयोग में ढील:–

कृषि अंचल में आने वाली किसी भूमि के मामले में, सरकार इस विकास योजना के उपबन्धों में निम्नलिखित हेतु ढील दे सकती है,–

(क) भूमि के आवासीय अथवा औद्योगिक कालोनी में उपयोग तथा विकास हेतु, बशर्ते उपनिवेशक द्वारा यह भूमि वास्तविक तिथि से पहले उक्त उपयोग तथा विकास के लिए क्रय की गई हो और उपनिवेशक नियमानुसार इस प्रयोजन के लिए अनुमति प्राप्त करता है।

(ख) व्यक्तिगत स्थल के रूप में भूमि उपयोग हेतु (औद्योगिक कालोनी से भिन्न)

परन्तु–

(i) वास्तविक तिथि से पूर्व भूमि क्रय की गई हो;

(ii) सरकार की संतुष्टि हो गई हो कि उद्योग की आवश्यकता इस प्रकार की है कि उपयुक्त अंचल में वैकल्पिक स्थल के आबंटन की प्रतीक्षा नहीं की जा सकती;

(iii) भू–स्वामी, नियमों के अधीन यथा अपेक्षित भवन निर्माण के लिए अनुमति प्राप्त करता है; तथा

(iv) भू–स्वामी, निदेशक द्वारा निर्धारित अनुपातिक प्रभारों जब कभी इस निमित्त निदेशक द्वारा मांग की जाये, का भुगतान निदेशक को करने का वचन देता है और अंतरिम अवधि में बहि:स्राव के निकास की संतोषजनक व्यवस्था करता है।

व्याख्या:– इस विनियम में प्रयुक्त शब्द "क्रय" से अभिप्राय है, पूर्ण स्वामित्व अधिकारों का अर्जन करना तथा क्रय इत्यादि के करार के रूप में विनिर्दिष्ट हक से कमतर नहीं।

XVIII. सघनता:–

दोनों ओर से 20 प्रतिशत की विभिन्नता सहित प्रत्येक रिहायशी सेक्टर, ड्राईग में दर्शायी गई सेक्टर सघनता तथा इसके अतिरिक्त, नई एकीकृत अनुज्ञापन पॉलिसी, दीन दयाल जन आवास योजना पॉलिसी तथा अफोर्डऐबल ग्रुप हाऊसिंग पॉलिसी में यथा विहित सघनता में विकसित किया जाएगा। 20 प्रतिशत ग्रुप हाऊसिंग कम्पोनन्ट पॉलिसी रिहायशी सेक्टर में भी लागू होगी।

XIX. कृषि अंचल में आबादी देह के बाहर फार्म गृहों की व्यवस्था:–

केवल भू–स्वामी (स्वामियों) को वास्तविक उपयोग के लिए फार्म गृहों की अनुमति दी जाएगी बशर्ते कि किसी शहरी क्षेत्र में उसका अपना कोई आवास नहीं हो, चूंकि कृषि अंचल में फार्म गृहों को अनुमत करने के लिए वास्तविक उद्देश्य फार्म के छोटे भाग पर कृषकों की आवासीय आवश्यकताओं को पूरा करना है, ताकि वह उस फार्म पर निवास करने के दौरान अपने कृषि उत्पाद की देख–रेख कर सकें। इसलिए आबादी देह के बाहर कृषि अंचल में निम्नलिखित शर्तों पर फार्म गृह अनुमत किया जा सकता है, यदि भूमि का क्षेत्र 2 एकड़ या इससे अधिक है:

	फार्म हाउस का आकार	आवासीय इकाई का मुख्य भवन	मुख्य आवासीय इकाई का अनुषंगी भवन
(i) स्थल आच्छादन	न्यूनतम 2 एकड तक परन्तु विकास प्लान अनुसार सड़क आरक्षण तथा प्रस्तावित सड़क की चौडाई के अधीन आने वाली भूमि/क्षेत्र भूमि उपयोग में परिवर्तन की अनुमति हेतु मान्य नहीं होगी। किन्तु कृषि अंचल में आने वाले आवेदित 2 एकड़ क्षेत्र मे से हरित पट्टी/ प्रतिबधित पट्टी के अधीन आने वाले क्षेत्र को छोडते हुए शेष क्षेत्र 1.5 एकड़ से कम नहीं होना चाहिए।	250 वर्ग गज के समकक्ष रिहायशी प्लाट के लिये यथा लागू।	फार्म की भूमि का एक प्रतिशत (मजदूरों/नौकरों के क्वार्टरों के लिए 40 प्रतिशत से अधिक का उपयोग नहीं किया जायेगा)
	3 एकड़ तक	375 वर्ग गज के समकक्ष रिहायशी प्लाट के लिये यथा लागू।	–सम–
	4 एकड़ तक और अधिक	500 वर्ग गज के समकक्ष रिहायशी प्लाट के लिये यथा लागू।	–सम–
(ii) ऊंचाई तथा मंजिल		11 मीटर, तीन मंजिलें	4 मीटर एक मंजिल

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(iii) **दूरी:** कृषि भूमि के सभी किनारों से कम से कम 10 मीटर दूर बशर्ते कि यदि फार्म हाऊस से संबद्ध भूमि सड़क के साथ लगती है तो गृह का निर्माण सड़क के किनारे से कम से कम निम्नलिखित दूरी पर किया जायेगा:–

क्रम संख्या	सडक	चौड़ाई
(क)	जहां सड़क अनुसूचित सड़क का बाईपास है	100 मीटर
(ख)	जहां सड़क अनुसूचित सड़क है	30 मीटर या जैसा विकास योजना में दर्शाया गया है।
(ग)	कोई अन्य सड़क	10 मीटर

(iv) **पहुँच सड़क:–**

राजस्व रिकार्ड में परिभाषित कोई राजस्व रास्ता/सड़क।

(v) **तहखाना:–**

तहखाना, भू–तल आच्छादन की अधिकतम सीमा तक अनुमत किया जाएगा और उपयोग हरियाणा भवन संहिता, 2017 के अनुसार अनुज्ञात हैं।

(vi) **पुश्तवान, अटारी तथा परछती तल:–**

पुश्तवान, अटारी और परछती तल की अनुमति भवन के भीतर उक्त निर्बन्धनों के साथ–साथ विकास योजना के अंचल विनियमों के खण्ड–II में दी गई परिभाषा में नियत निर्बन्धनों के अध्यधीन दी जायेगी।

(vii) **सेवायें, जल आपूर्ति तथा जल–निकास:–**

(क) यदि फार्म गृह का निर्माण किया जाता है, तो फार्म में मानव उपयोग के लिए अच्छी पीने योग्य जल आपूर्ति उपलब्ध होनी चाहिए।

(ख) डेरी फार्म के मामले में छायाबानों की सफाई हेतु खुली स्वच्छ निकास नालियां अथवा ढकी हुई निकास नालियों की व्यवस्था की जाये, सभी भवनों के मामले में, वर्षा जल के निकास हेतु निकास नालियों की व्यवस्था की जानी है।

(ग) नियमों के उपबन्धों के अनुसार मानव और पशुओं के अपशिष्ट निस्तारण के लिए मलाश्य की व्यवस्था की जाये।

(घ) मलाश्य और खुले कुएं अथवा नलकूप के बीच दूरी नियमों में यथा उपबन्धित अनुसार होगी ;

(viii) स्वामी को फार्म हाऊस की मुख्य आवासीय इकाई और उसके अनुषंगी भाग के इर्द–गिर्द चार दीवारी के निर्माण की अनुमति दी जायेगी तथा फार्म के शेष क्षेत्र के इर्द–गिर्द कंटीली तारों वाली बाड़ लगाने की अनुमति होगी।

(ix) केन्द्रीय भूजल बोर्ड द्वारा यथा घोषित अत्यधिक शोषित अथवा सकंटमय क्षेत्र से भिन्न क्षेत्र में फार्म हाऊस की स्थापना हेतु भुमि उपयोग में परिवर्तन की अनुमति पर विचार किया जायेगा :

परन्तु सरकार कृषि अंचल के उचित उपयोगिता के लिए राज्य सरकार/राज्य अभिकरण द्वारा प्रायोजित किसी स्कीम के लिए फार्म के न्यूनतम आकार में संशोधन कर सकती है।

XX. सूचना प्रौद्योगिकी इकाईयों और साईबर पार्कों/साईबर शहरों के लिए उपबन्ध:–

I. अवस्थिति

(क) सूचना प्रौद्योगिकी इकाईयां केवल औद्योगिक क्षेत्र/औद्योगिक अंचल में अवस्थित होंगी;

(ख) साईबर पार्क/सूचना प्रौद्योगिकी पार्क एकीकृत विकास के रूप में सैक्टर सड़क के साथ लगते हुए या तो औद्योगिक क्षेत्र या औद्योगिक अंचल में अवस्थित होंगे। तथापि, ऐसे पार्कों में किन्हीं विनिर्माण इकाईयों को अनुज्ञात नहीं किया जाएगा।

(ग) साईबर शहर :– ऐसी सुविधा की अवस्थिति सरकार द्वारा सुनिश्चित की जाएगी।

II. आकार

क्रम संख्या	प्रकार	आकार
1	सूचना प्रौद्योगिकी औद्योगिक इकाई	1 से 5 एकड़
2	साईबर पार्क / सूचना प्रौद्योगिकी पार्क	5 से 15 एकड़
3	साईबर सिटी	न्यूनतम 50 एकड़

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III. विविधः–

I. पार्किंगः–

पार्किंग समय समय पर यथासंशोधित हरियाणा भवन संहिता, 2017 के उपबन्धों के अनुसार होगी।

II. अन्य क्रियाकलापः–

(क) आनुषांगिक वाणिज्यिक क्रियाकलाप जैसे बैंक, रैस्टोरैन्ट, इंश्योरैंस कार्यालय इत्यादि, को साईबर पार्क/सूचना प्रौद्योगिकी पार्क के कुल क्षेत्र के 4 प्रतिशत निर्बन्धन के अधीन रहते हुए अनुमति दी जायेगी;

(ख) साईबर शहर के क्षेत्र का केवल 5 प्रतिशत क्षेत्र वर्ग आवास के लिए अनुमत किया जायेगा तथा इस साईबर शहर का कुल क्षेत्र 4 प्रतिशत वाणिज्यिक / संस्थागत उपयोगों के लिए अनुमत किया जायेगा;

(ग) साईबर शहर में रिहायशी प्लाटिड विकास की अनुमति नहीं दी जायेगी;

(घ) किसी साईबर शहर परियोजना के लिए यदि कृषि अंचल में अनुज्ञात हो, तो उद्यमी जल–आपूर्ति तथा अन्य सुविधाओं जैसे मल जलनिस्तारण/निकास नालिया इत्यादि का प्रबन्ध करेगा।

III. सरकार कोई अन्य शर्त अधिरोपित कर सकती है जैसा समय–समय पर आवश्यक समझे।

XXI. संचार टावरों की स्थापनाः–

नियंत्रित क्षेत्र के भीतर संचार टावर स्थापित करने के लिए अनुमति, समय–समय पर यथा सशोंधित विभाग की पालिसी/अनुदेशों दिनांक 10 मार्च, 2015 के अनुसार प्रदान की जाऐगी।

XXII. भूकंम्पीय आपदा से सुरक्षाः–

भारतीय मानक आई. एस. 1893:2002 के भूकम्पीय क्षेत्र मानचित्र के अनुसार विकास योजना का क्षेत्र भूकम्पीय क्षेत्र जोन IV अंतर्गत आता है तथा इसे उच्च जोखिम क्षेत्र माना गया है। उपरोक्त को ध्यान में रखते हुए, सम्पूर्ण शहरी विकास घटना तीव्रता 'VIII' की सम्भाव्यता हेतु सुरक्षा की जांच की जाएगी तथा भवनों तथा अवसंरचना में अपेक्षित भूकम्पीय प्रतिरोध, जो आवश्यक पाया जाए, उन्नत किया जाएगा।

XXIII. नियंत्रित क्षेत्र में स्थित ईंटों के भट्टेः–

नियंत्रित क्षेत्रों में स्थित ईंट भट्टों का स्थापन समय–समय पर सक्षम प्राधिकारी द्वारा जारी सम्बंधित नीति/दिशा–निर्देशों द्वारा शासित होंगें।

XXIV. विकास योजना में ढीलः–

सरकार, अत्यन्त कठिनाई की दशा में अथवा वास्तविक तिथि से पूर्व निर्मित किसी ढांचे को बचाने के दृष्टिगत ऐसे विकास प्रभारों के भुगतान पर और ऐसी अन्य शर्तों पर, जो वह लगाना उचित समझे, साम्य और न्याय के सिद्धान्तों पर विकास योजना के किसी भी उपबन्ध में ढील दे सकती है।

परिशिष्ट क

भूमि उपयोगों का वर्गीकरण

मुख्य कोड	उपकोड	मुख्य वर्ग	उपवर्ग
100		रिहायशी	पड़ोस–पद्धति पर रिहायशी सैक्टर
200		वाणिज्यिक	
	210		परचून व्यवसाय
	220		थोक व्यवसाय
	230		भांडागार और भंडारण
	240		कार्यालय और बैंक जिसमें सरकारी कार्यालय भी शामिल हैं।
	250		रैस्तरां, होटल तथा अस्थाई बोर्डिंग हाऊस, जिनमें धर्मशाला, पर्यटक गृह आदि जैसे रिहायशी आवास की व्यवस्था वाली सार्वजनिक सहायता संस्थायें भी शामिल हैं
	260		वाणिज्यिक आधार पर सिनेमा तथा लोगों के एकत्रित होने वाले अन्य स्थान
	270		व्यवसायिक स्थापनायें
300		औद्योगिक	
	310		सेवा उद्योग
	320		हल्के उद्योग
	330		व्यापक उद्योग
400		परिवहन तथा संचार	
	410		रेलवे यार्ड, रेलवे स्टेशन तथा साईडिंग

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मुख्य कोड	उपकोड	मुख्य वर्ग	उपवर्ग
	420		सड़कें, सड़क परिवहन डिपो और पार्किंग क्षेत्र,
	450		टेलीग्राफ केन्द्र, दूरभाष केन्द्रइत्यादि
500		जन उपयोगितायें	
	510		जल आपूर्ति संस्थापन जिसमें शोधन संयंत्र भी शामिल हैं
	520		जल निकास और सफाई संस्थापनायें जिनमें निस्तारण कार्य भी शामिल हैं,
	530		विद्युत शक्ति संयंत्र उपस्टेशन इत्यादि
	540		गैस संस्थापन और गैस कार्य
	550		ठोस अपशिष्ट प्रबन्धन स्थल
600		सरकारी और अर्धसरकारी	
	610		सरकारी प्रशासन, केन्द्रीय सचिवालय, जिला कार्यालय, विधि न्यायालय, जेलें, पुलिस थाने, राज्यपाल तथा राष्ट्रपति निवास
	620		शिक्षा, सांस्कृतिक और धार्मिक संस्थायें
	630		चिकित्सा तथा स्वास्थ्य संस्थायें
	640		मुख्यतः गैर वाणिज्यिक किस्म के थियेटर, आपेरा हाऊस इत्यादि जैसी सांस्कृतिक संस्थायें
700		खुले स्थान	
	710		खेलकूद मैदान, स्टेडियम, क्रीड़ा मैदान
	720		पार्क
	730		हरित पट्टी, बाग तथा अन्य मनोरंजन संबंधी उपयोग
	740		कब्रिस्तान, शमशान घाट इत्यादि
	750		फ्यूल स्टेशन तथा बस पंक्ति शैल्टर
	760		जल निकाय/झीलें
800		कृषि भूमि	
	830		प्रधान फसल के अधीन भूमि
	850		वन भूमि
	880		जलमग्न भूमि
	890		डेरी फार्मिंग

परिशिष्ट ख

मुख्य भूमि उपयोगों के अधीन दी गई अनुमत गतिविधियां, सरकार द्वारा स्वीकृत पालिसी/मापदंडों तथा सैक्टर/कालोनी में सक्षम प्राधिकारी द्वारा स्थल पर यथा अनुमत अनुसार अनुमत की जाएगी।

I. रिहायशी जोन

(i) आवासीय
(ii) सामाजिक, सामुदायिक, धार्मिक और आमोद प्रमोद गृह
(iii) जन उपयोगिता भवन
(iv) शैक्षणिक भवन और सभी प्रकार के विद्यालय और महाविद्यालय, जहाँ आवश्यक हों
(v) स्वास्थ्य संस्थायें
(vi) सिनेमा
(vii) वाणिज्यिक और व्यवसायिक कार्यालय
(viii) परचून की दुकानें, ढाबे और रैस्तरां
(ix) स्थानीय सेवा उद्योग
(x) ईंधन स्टेशन
(xi) बस स्टाप, तांगा, टैक्सी, स्कूटर तथा आटो/रिक्शा स्टैंड
(xii) नर्सरियां और हरित गृह

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(xiii) रिहायशी उपयोग में अनुषंगी कोई अन्य छोटी–छोटी जरूरतें

(xiv) सितारा होटल

(xv) क्लब/सामुदायिक केन्द्र

(xvi) संचार टावर

(xvii) अतिथि/बोर्डिंग आवास

(xviii) कोई अन्य उपयोग, जिसे सरकार लोकहित में विनिश्चित करे।

II. वाणिज्यिक जोन

(i) परचून व्यापार

(ii) थोक व्यापार

(iii) भांडागार और भंडारण

(iv) वाणिज्यिक कार्यालय और बैंक

(v) रैस्तरां तथा अस्थाई आवास गृह जिसमें धर्मशाला और पर्यटक गृह आदि जैसे रिहायशी स्थान प्रदान करने वाले सार्वजनिक सहायता संस्थाएं शामिल हैं

(vi) सिनेमा, होटल, मोटल तथा वाणिज्यिक आधार पर चलने वाले और लोगों के इकट्ठा होने वाले अन्य स्थान जैसे थियेटर, क्लब, ड्रामा क्लब आदि

(vii) व्यावसायिक स्थापनायें

(viii) प्रथम तथा उच्चतर मंजिलों पर निवास

(ix) स्थानीय सेवा उद्योग

(x) जन उपयोगिता भवन

(xi) ईंधन स्टेशन और सर्विस गैरेज

(xii) माल चढ़ाने और उतारने वाले यार्ड

(xiii) पार्किंग स्थल, बस स्टाप, टैक्सी, तांगा, आटो/रिक्शा स्टैंड

(xiv) नगर पार्क

(xv) संचार टावर

(xvi) कोई अन्य उपयोग, जिसे सरकार लोकहित में विनिश्चित करे।

III औद्योगिक अंचल

(i) हल्के उद्योग

(ii) मध्यम उद्योग

(iii) घृणाजनक और परिसंकटमय उद्योग

(iv) भारी उद्योग

(v) सर्विस उद्योग

(vi) भांडारण और भंडारण

(vii) पार्किंग, माल चढ़ाने और उतारने वाले क्षेत्र

(viii) ट्रक स्टैंड / बस स्टाप, टैक्सी तांगा और आटो/रिक्शा स्टैंड

(ix) सेक्टर के कुल क्षेत्र की अधिकतम तीन प्रतिशत की सीमा के अनुसार जन उपयोगिता, सामुदायिकभवन, परचून की दुकानें, बैंक, ढाबे, रैस्टोरैन्ट, दो/ तीन /पांच सितारा होटल तथा बीमा कार्यालयनिम्नानुसार हैं:–

क्रम संख्या	सुविधा का नाम	क्षेत्र		सैक्टर में कुल सुविधाएं	वाणिज्यिक घटक	अधिकतम भूतल आच्छादन	फर्श क्षेत्र अनुपात	पहुँच सड़क
		न्यूनतम	अधिकतम					
1	ढाबा	500 वर्गमीटर	1000 वर्गमीटर	2	50 वर्गमीटर	40 प्रतिशत	0.40	न्यूनतम 18 मीटर
2	रैस्टोरैन्ट	1000 वर्गमीटर	2000 वर्गमीटर	2	10 प्रतिशत	30 प्रतिशत	1.50	न्यूनतम 18 मीटर

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3.	दो/तीन सितारा होटल	1.0 एकड	2.5 एकड	2	15 प्रतिशत	30 प्रतिशत	वाणिज्यिक योजनानुसार	न्यूनतम 24 मीटर
4.	पांच सितारा होटल	2.5 एकड	4 एकड़	1	15 प्रतिशत	30 प्रतिशत	वाणिज्यिक योजनानुसार	सैक्टर विभाजित सडक जिस पर सर्विस सडक का प्रावधान हो।

(x) ईंधन स्टेशन तथा सर्विस गैरेज

(xi) निदेशक द्वारा अनुमत लिक्वीड पैट्रोलियम गैस गोदाम

(xii) साईबर पार्क/सूचना प्रौद्योगिकी पार्क/सूचना प्रौधोगिकी औद्योगिक इकाइयां

(xiii) स्वास्थ्य सुविधाएं जैसे अस्पताल, औषधालय, नर्सिंग होम तथा क्लीनिक:

क्रम संख्या	सुविधा का नाम	क्षेत्र		सैक्टर में कुल सुविधाएं	रिहायशी घटक	अधिकतम भूतल आच्छादन	फर्श क्षेत्र अनुपात
		न्यूनतम	अधिकतम				
1	अस्पताल	2.5 एकड	5 एकड़	1	15 प्रतिशत	33 प्रतिशत	1.00
2	औषधालय	1.0 एकड	1.5 एकड	1	15 प्रतिशत	33 प्रतिशत	1.00
3	नर्सिंग होम	250 वर्गमीटर	500वर्गमीटर	2	शून्य	60 प्रतिशत	1.00
4.	क्लीनिक	250 वर्गमीटर	500वर्गमीटर	2	शून्य	60 प्रतिशत	1.00

(xiv) औद्योगिक कालोनी कम से कम 15 एकड़ में होगी। इस क्षेत्र का उपयोग अपर मुख्य सचिव, नगर तथा ग्राम आयोजना विभाग हरियाणा चण्डीगढ़ की यथा अद्यतन संशोधित पालिसी संख्या मिसलेनियस 388/पी.ए.(आरबी)/2015/7/16/2006–2टीसीपी, दिनांक प्रथम अक्तूबर, .2015 के अनुसार होगा।

(xv) संचार टावर

(xvi) तैयार मिश्रण कंक्रीट संयत्र, वेट मिश्रण संयत्र, गर्म मिश्रण संयत्र इत्यादि

(xvii) धर्म कांटा

(xviii) सर्विस गैरज, बिक्री/प्रदर्शन केन्द्र सह–सर्विस गैरज का विवरण निम्न अनुसार है:–

क्रम संख्या	सुविधा का नाम	क्षेत्र (एकड़ में)		वाणिज्यिक घटक	अधिकतम भूतल आच्छादन	तल क्षेत्र अनुपात	पहुंच मार्ग	ऊँचाई
		न्यूनतम	अधिकतम					
1	सर्विस गैरज	0.5	1	शून्य	60 प्रतिशत	1.25	न्यूनतम 18 मीटर या सेक्टर सड़क के साथ प्रस्तावित सर्विस रोड	18 मीटर
2	बिक्री प्रदर्शन केन्द्र–एवं–सर्विस गैरज	0.5	2	अनुज्ञेय फर्श क्षेत्र अनुपात का 10 प्रतिशत	60 प्रतिशत	1.25	न्यूनतम 18 मीटर या सेक्टर सड़क के साथ प्रस्तावित सर्विस रोड	18 मीटर

टिप्पण:–*वाणिज्यिक घटक के विषय में फीस तथा प्रभार वाणिज्यिक दरों पर उदगृहीत किए जाएंगे;

* विद्यमान/पहले से भूमि उपयोग परिवर्तन अनुमति प्राप्त सर्विस गैराज को बिक्री/प्रदर्शन केन्द्र की अनुमति देने हेतु उपरोक्त मानदण्डों को पूरा करने के अध्यधीन विचारा जाएगा।

(xix) कोई अन्य उपयोग, जिसे सरकार लोकहित में विनिश्चित करे।

IV परिवहन तथा संचार अंचल

(i) रेलवे यार्ड, रेलवे स्टेशन और साईडिंग

(ii) परिवहन नगर, सड़कें और परिवहन डिपो और पार्किंग क्षेत्र

(iii) हवाई अड्डा और हवाई स्टेशन

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(iv) दूरभाष केन्द्र
(v) प्रसारण केन्द्र
(vi) दूरदर्शन केन्द्र
(vii) अनुमोदित स्थलों और स्थानों पर कृषि, बागवानी और नर्सरिज
(viii) ईंधन स्टेशन और सर्विस गैरेज
(ix) पार्किंग स्थल, बस स्टाप–शैल्टर, टैक्सी, टांगा और ओटो/रिक्शा स्टैंड
(x) रसद केन्द्रों/कंटेनर यार्डस, अंर्तदेशीय कंटेनर डिपो, कंटेनर फ्रेट स्टेशन
(xi) धर्म कांटा
(xii) संचार टावर
(xiii) सैक्टर के कुल क्षेत्र की अधिकतम 20 प्रतिशत की सीमा तक भांडागार
(xiv) वर्तमान नीति के अनुसार ढाबा।

V जनउपयोगितायें

(i) जल सप्लाई, संस्थापनाएं जिसमें शोधन संयंत्र भी शामिल हैं
(ii) जल निकास और सफाई स्थापनाएं इसमें मलजल शोधन संयंत्र तथा निपटान कार्य भी शामिल हैं
(iii) विद्युत शक्ति संयंत्र तथा सब–स्टेशन जिसमें ग्रिड सब–स्टेशन भी शामिल हैं
(iv) गैस संस्थापनाएं तथा गैस वर्कस
(v) ठोस अपशिष्ट प्रबन्धन स्थल

VI सार्वजनिक तथा अर्धसार्वजनिक उपयोग अंचल

(i) सरकारी कार्यालय, सरकारी प्रशासन केन्द्र, सचिवालय और पुलिस थाना
(ii) शैक्षणिक, सांस्कृतिक और धार्मिक संस्थायें
(iii) चिकित्सा स्वास्थ्य संस्थायें
(iv) नागरिक/सांस्कृतिक और सामाजिक संस्थान जैसे थियेटर, ओपेरा हाउस इत्यादि जो मुख्यतः गैर वाणिज्यिक किस्म के हों।
(v) रक्षा से सम्बन्धित भूमि
(vi) ढाबा, रेस्टोरेन्ट निम्न अनुसारः–

क्रम संख्या	सुविधा का नाम	क्षेत्र		सैक्टर में कुल सुविधाओं की संख्या	वाणिज्यिक घटक	अधिकतम भूतल आच्छादन	फर्श क्षेत्र अनुपात
		न्यूनतम	अधिकतम				
1	ढाबा	500 वर्गमीटर	1000 वर्गमीटर	2	50 वर्गमीटर	50 प्रतिशत	40 प्रतिशत
2	रैस्टोरैन्ट	1000 वर्गमी0	2000 वर्गमी0	2	10 प्रतिशत	30 प्रतिशत	150 प्रतिशत

(vii) संचार टावर
(viii) ईंधन स्टेशन
(ix) कोई अन्य उपयोग, जिसे सरकार लोकहित में विनिश्चित करे।

VII खुले स्थान

(i) खेलकूद मैदान, स्टेडियम तथा क्रीड़ा मैदान
(ii) पार्क तथा हरित पट्टी, बाग तथा अन्य मनोरंजनात्मक उपयोग।
(iii) कब्रिस्तान, शमशान घाट इत्यादि
(iv) निदेशक की अनुमति से सड़कों के साथ ईंधन स्टेशन, बस पंक्ति/शैल्टर
(v) अनुसूचित सड़कों तथा मुख्य सड़कों के साथ हरित पट्टी में सार्वजनिक उपयोगिता सेवाएं जैसे इलैक्ट्रक ग्रिड स्टेशन, प्रेषण लाईनें, संचार लाईनें, जल आपूर्ति लाइनें सीवरेज लाईनें, ड्रैनेज लाईनें।
(vi) जल निकाय/झील/जल पुर्नभरण क्षेत्र
(vii) संचार टावर
(viii) मेला स्थल तथा बहु उपयोगी मैदान
(ix) कोई अन्य उपयोग, जिसे सरकार लोकहित में विनिश्चित करे।

VIII कृषि अंचल

(i) कृषि, बागवानी, डेयरी और मुर्गी पालन
(ii) आबादी देह के भीतर गांव घर
(iii) अंचल विनियम XIX में यथा निर्धारित निर्बन्धनों के अध्यधीन, आबादी देह के बाहर फार्म हाऊस

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(iv) वन रोपण विकास तथा मनोरंजन के लिए उसका कोई भाग

(v) आबादी देह के समीप वर्तमान गांव का विस्तार यदि यह परियोजना, केन्द्र सरकार या राज्य सरकार द्वारा अनुमोदित या प्रायोजित हो

(vi) दुग्ध अवशीतन केन्द्र और पैस्चयूरीकरण केन्द्र

(vii) बस अड्डा और रेलवे स्टेशन

(viii) अनिवार्य भवनों सहित हवाई अड्डा

(ix) बेतार केन्द्र

(x) निदेशक द्वारा अनुमोदित स्थलों पर अनाज गोदाम, भंडारण स्थल

(xi) मौसम कार्यालय

(xii) भू–जल निकास और सिंचाई, पन बिजली कार्य और सिंचाई के लिए नलकूप

(xiii) टेलीफोन और बिजली प्रेषण लाईनें ओर खम्भे

(xiv) अनुमोदित स्थल पर खनन तथा उत्खनन कार्य जिसमें चूना तथा ईंटों के भट्टे, पत्थर, खदानें और क्रेशिंग शामिल है, जो नियमों के अधीन रहते हुए हैं।

(xv) शमशान और कब्रिस्तान

(xvi) ईंधन स्टेशन और सर्विस गैरेज

(xvii) नवीकरणीय और गैर नवीकरणीय उर्जा शक्ति संयंत्र

(xviii) निदेशक के अनुमोदन से लिक्विड पैट्रोलियम गैस गोदाम

(xix) लघु उद्योग औद्योगिक इकाइयों को निम्नलिखित शर्तों की पूर्ति के अधीन रहते हुए अनुमति दी जाएगी, बशर्ते ऐसा स्थल रक्षा संस्थापनाओं, यदि कोई हो, के इर्द गिर्द रक्षा संकर्म अधिनियम, 1903 (1903 का केन्द्रीय अधिनियम 7) के अधीन वर्जित पट्टी के भीतर नहीं होना चाहिए।

क. स्थल मानदंड		
अंचल	**मानदंड**	
कम संभावित क्षेत्र	शहरीकरण क्षेत्र से 2 किमी के भीतर (परिधीय सड़कों को छोड़कर, यदि शहरी सीमा पर प्रस्तावित किया गया हो)	शहरीकरण क्षेत्र से 2 किमी से अधिक (परिधीय सड़कों को छोड़कर, यदि शहरी सीमा पर प्रस्तावित किया गया हो)
	किसी भी क्षेत्र की गैर–प्रदूषणकारी हरी श्रेणी इकाइयां	किसी भी क्षेत्र की ग्रीन और नारंगी श्रेणी इकाइयां
ख. पहुँच मानदंड		
मध्यम और निम्न संभावित क्षेत्र	औद्योगिक उपयोग के लिए कृषि क्षेत्र में भूमि उपयोग परिवर्तन अनुमति देने के लिए न्यूनतम 30 फीट चौड़ा राजस्व सड़क / सार्वजनिक सड़क पर विचार किया जाएगा । तथापि, यदि भूमि उपयोग की औद्योगिक परिवर्तन 5 करम (27.5 फुट) चौड़ा राजस्व मार्ग / सार्वजनिक सड़क पर दी गई है, तो उस सड़क पर भूमि उपयोग परिवर्तन अनुमति के लिए आवेदन, इस शर्त के अध्यधीन विचारा जाएगा कि आवेदन करने वाले साइट के सामने 6 कर्म (33 फुट) परियोजना प्रत्यार्तक दर्शाता है कि 1 करम (5.5 फुट) चौड़ी पट्टी ग्राम पंचायत / स्थानीय प्राधिकरण को हिबबानैमा / उपहार के माध्यम से विस्तृत पट्टी के रूप में बनाने के लिए लागू की गई भूमि ।	

(xx) अनुसूचित सड़कों, राष्ट्रीय राजमार्ग और राज्य राजमार्ग के अलावा सार्वजनिक सड़क/रास्ता जिसकी चौड़ाई 30 फीट से कम है, पर गैर प्रदूषणकारी मध्यम और बड़े पैमाने पर कृषि आधारित उद्योग; बशर्ते कि ऐसी स्थापना, यदि कोई हो, के लिए यथा लागू सुरक्षा स्थापना के आसपास निर्बन्धित पट्टी के भीतर नहीं होना चाहिए ।

(xxi) निर्बन्धित/हरित पट्टी के बाहर क्षेत्र में राष्ट्रीय राजमार्ग/अनुसूचित सड़कों के साथ ढाबे, बैंक्विट हाल, लघु रैस्टोरैन्ट, मोटल, होटल रिर्सोटज तथा मन बहलाव पार्क/थीम पार्क निम्न अनुसार होंगे:

क्रम संख्या	अनुज्ञेय गतिविधि	क्षेत्र		वाणिज्यक घटक	अधिकतम भूतल आच्छादन	फर्श क्षेत्र अनुपात
		न्यूनतम	अधिकतम			
1	ढाबा	1000 वर्ग मीटर	1.0 एकड़	50 वर्ग मीटर	40 प्रतिशत	40 प्रतिशत

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2	रैस्टोरैन्ट	2000 वर्ग मीटर	1.0 एकड़	15 प्रतिशत	30 प्रतिशत	150 प्रतिशत
3	बैंकट सुविधाओं सहित मोटल	2.5 एकड़	5 एकड़	15 प्रतिशत	30 प्रतिशत	150 प्रतिशत
4	रिर्सोट	4.0 एकड़	10 एकड़	15 प्रतिशत	30 प्रतिशत	150 प्रतिशत
5	मन–बहलाव पार्क/थीम पार्क	2.5 एकड़	10 एकड़	15 प्रतिशत	30 प्रतिशत	50 प्रतिशत

परन्तु पहुंच अनुज्ञा, यदि स्थल राष्ट्रीय राजमार्ग पर अवस्थित है, तो भारतीय राष्ट्रीय राजमार्ग प्राधिकरण तथा यदि स्थल अनुसूचित सड़क पर अवस्थित है, तो कार्यकारी अभियन्ता, लोक निर्माण विभाग (भवन तथा सड़कें) से प्राप्त की गई है।

(xxii) **बैंक्विट हाल:**

अनुज्ञेय अचंल	कृषि अचंल
पहुंच	1. पहुंच सड़क की न्यूनतम चौडाई 18 मीटर होनी चाहिए। 2. यदि स्थल अनुसूचित सड़क पर स्थित हो, तो पहुंच अनुज्ञा कार्यकारी अभियंता, लोक निर्माण विभाग (भवन तथा सड़कें) से अपेक्षित है। 3. राष्ट्रीय राजमार्ग से भी पहुंच विचारी जा सकती है, यदि स्थल चौराहा/ पहुंच मार्ग से न्यूनतम दूरी मानक पूरा करता हो तथा न्यूनतम 7 मीटर चौडी सेवा सड़क पर अवस्थित हो या आवेदक भारतीय राष्ट्रीय राजमार्ग प्राधिकरण से पहुंच की पूर्व अनुज्ञा प्रस्तुत करता है।
अपेक्षित क्षेत्र	न्यूनतम 2.5 एकड़ अधिकतम 5.00 एकड़
फर्श क्षेत्र अनुपात	50 प्रतिशत
भूतल आच्छादन	30 प्रतिशत
परिवर्तन प्राभार	वाणिज्यिक उपयोग के लिए विहित दर का 50 प्रतिशत
फर्श क्षेत्र अनुपात के भीतर अनुज्ञेय अनुषांगिक उपयोग	उपहार दुकान, एस टी डी बूथ, खिलौना केन्द्र तथा फूलों की दूकानें इत्यादि के लिए अनुमत फर्श क्षेत्र अनुपात का 10 प्रतिशत
पार्किंग	स्थल क्षेत्र का न्यूनतम 25 प्रतिशत

टिप्पण:–

नगरपालिका सीमा के भीतर विवाह महल/बैंक्विट हॉल की व्यवस्था शहरी स्थानीय निकायों के विभाग द्वारा अनुमोदित तथा समय समय पर संशोधित नीति के अनुसार होगा ।

(xxiii) माईक्रोवेव टावर/स्टेशन, भूकम्प केन्द्र तथा दूरसंचार केन्द्र

(xxiv) संचार टावर

(xxv) सरकार या सरकारी एजेंसी द्वारा संविदा अथवा कार्य हेतु अल्पावधि के लिए लगाए जाने वाले तैयार मिश्रण कंक्रीट संयंत्र, वेट मिश्रण संयंत्र, गर्म मिश्रण संयंत्र इत्यादि।

(xxvi) सर्विस गैरज, बिक्री/प्रदर्शन केन्द्र–सह–सर्विस गैरज का विवरण निम्न अनुसार है:

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क्रम संख्या	सुविधा का नाम	क्षेत्र (एकड़ में)		वाणिज्यिक घटक	अधिकतम भूतल आच्छादन	फर्श क्षेत्र अनुपात	पहुंच मार्ग	उंचाई
		न्यूनतम	अधिकतम					
1	सर्विस गैरज	0.5	1	शून्य	60 प्रतिशत	1.25	18 मीटर या सेक्टर सड़क के साथ सर्विस सड़क	18 मीटर
2	बिक्री/प्रदर्शन केन्द्र– सह–सर्विस गैरज	0.5	2	अनुज्ञेय फर्श क्षेत्र अनुपात का 10 प्रतिशत	60 प्रतिशत	1.25	18 मीटर या सेक्टर सड़क के साथ सर्विस सड़क	18 मीटर

टिप्पण: *वाणिज्यिक घटक पर फीस तथा प्रभार वाणिज्यिक दरों पर उद्गृहीत किए जाएंगे;
*विद्यमान/पहले से भूमि उपयोग परिवर्तन अनुमित प्राप्त सर्विस गैराज को बिक्री/प्रदर्शन केन्द्र की अनुमति देने हेतु उपरोक्त मानदण्डों को पूरा करने के अध्यधीन विचारा जाएगा।

(xxvii) धर्म कांटा

(xxviii) कोई अन्य उपयोग, जिसे सरकार लोकहित में विनिश्चित करे।

IX **बिल्कुल निषिद्ध उपयोग**

उचित अनुज्ञप्ति के बिना पैट्रोलियम और अन्य प्रज्जवलनीय सामग्री का भंडारण

परिशिष्ट–1

सूचना प्रौद्योगिकी उद्योग के स्कोप/परिभाषा में सम्मिलित किए गए उद्योगों की श्रेणियां

(क) **कम्प्यूटर डिवाईसिज के अन्तर्गत :**

डैस्क्टाप
पर्सनल कम्पयूटरर्स
सरवर्स
वर्क स्टेशन
नोडस
टरमिनलस
नैटवर्क पी.सी.
होम पी.सी.
लैपटॉप कम्पयूटरर्स
नोट बुक कम्पयूटरर्स
पामटॉप कम्पयूटरर्स/पी.डी.ए.

(ख) **नैटवर्क कंट्रोलर कॉर्ड/मेमोरी के अन्तर्गत :**

नैटवर्क इन्टरफेस कार्ड (एन.आई.सी.)
एडॉप्टर इथरनेट/पी.सी.आई./ई.आई.एस.ए./कोम्बो/पी.सी.एम.आई.सी.ए.
एस.आई.एम.एम.मेमारी
डी.आई.एम.एम.मेमोरी
सैन्ट्रल प्रोसैंसिग यूनिट(सी.पी.यू.)
कन्ट्रोलर एस.सी.एस.आई. / ऐरे
प्रोसैसर का प्रौसेसर / प्रोसैसर पावर मोडयूल / अपग्रेड

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(ग) **स्टोरेज यूनिटस के अन्तर्गत :**
हार्ड डिसक ड्राईवस / हार्ड ड्राईवस
आर.ए.आई.डी. डिवाईसिस एवं उसके कन्ट्रोलर
फलोपी डिस्क ड्राईव
सी.डी.रोम डाईव
टेप ड्राईवस डी.एल.टी. ड्राईवस / डी.ए.टी.
आपटिकल डिस्क ड्राईव
अन्य डिजीटल स्टोरेज डिवाईज

(घ) **अन्य :**
की बोर्ड
मोनीटर
माऊस
मल्टीमीडिया किट्स

(ड.) **प्रिन्टर तथा आऊटपुट डिवाईसिस के अन्तर्गत :**
डोट मैट्रिक्स
लेजरजेट
इन्कजैट
डेस्कजैट
एल.ई.डी. प्रिन्टर्स
लाईन प्रिन्टर्स
प्लाटर्स
पास बुक प्रिन्टर्स

(च) **नेटवर्किंग उत्पाद के अन्तर्गत:**
हब्ज
रूटर्स
स्विचिस
कोन्सनट्रेटर्स
ट्रांसरिसिवर्स

(छ) **सोफटवेयर के अन्तर्गत :**
एप्लीकेशन्स साफटवेयर
आपरेटिंग सिस्टम
मिडल वेयर / फर्म वेयर

(ज) **कम्पयूटर सिस्टम के लिए लगने वाली पावर सप्लाई के अन्तर्गत :**
स्विच मोड पावर सप्लाई
अनइन्टरप्टिड पावर सप्लाई

(झ) **नेटवर्किंग / केबलिंग तथा उससे संबंधित उपकरण :**
(सूचना प्रौद्योगिकी उद्योग से संबंधित)
फाईबर केबल
कोपर केबल
केबल्स
कनैक्टर्स, टरमिनल ब्लाक
जैक पैनल्स, पैच कोर्ड
माऊटिंग कोर्ड / वायरिंग ब्लाक
सरफेस माउंट बक्से

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(ञ) **कन्ज्यूमेबल्स के अन्तर्गत :**
सी.डी.रोम / कम्पैक्ट डिस्क
फलोपी डिस्क
टैप्स डी.ए.टी. / डी.एल.टी.
रिबन्स
टोनर्स
इन्कजैट कारटेजिस
आऊटपुट डिवाईसिस को लगने वाली इंक

(ट) **इलैक्ट्रोनिक कम्पोनेन्ट :**
प्रिंटिड सर्किट बोर्ड / पापुलेटिड पी.सी.बी.
प्रिंटिड सर्किट बोर्ड / पी.सी.बी.
ट्रांजिस्टर्स
इन्टैग्रेटिड सर्किट्स / आई.सी.
डायोड्स / थाईरिस्टर / एल.ई.डी.
रेसिस्टर्स
केपेसिटर्स
स्विचिस (ऑन / ऑफ, पुश बटन, रोकर्स इत्यादि)
प्लगस / सोकेट्स / रिलेज
मेगनेटिक हेड्स, प्रिन्ट हैड्स
कनेक्टर
माईक्रोफोन्स / स्पीकर्स
फयूजिस

(ठ) **टैलीकम्यूनिकेशन इक्वीपमेन्ट के अन्तर्गत :**
टैलीफोन
विडियो फोन
फेसी माईल मशीन / फैक्स कार्ड
टैली प्रिन्टर्स / टैलेक्स मशीन
पी.ए.बी.एक्स. / ई.पी.ए.बी.एक्स. / आर.ए.एक्स. / एम.ए.एक्स. टैलीफोन एक्सचैंज
मल्टीप्लेक्सर्स / म्यूजिस
मोडम्स
टैलीफोन आन्सरिंग मशीन
टैलीकम्यूनिकेशन्स स्वीचिंग एपरेटर्स
एन्टेना तथा मास्ट
वायरलैस डेटाकोम इक्वीपमेन्ट
रिसीविंग इक्वीपमेन्ट लाईक पेजर्स, मोबाईल / सैल्यूलर फोन इत्यादि
वी.एस.ए.टीज.
वीडियो कोनफोरेंसिंग इक्वीपमेन्ट
वीडियो एवं डिजिटल सिंगनलिंग के लिए लगने वाले सैट टाप बक्से के अन्तर्गत

(ढ) **सूचना प्रौद्योगिकी को समर्थ बनाने वाली सेवायें वह व्यवसायिक क्रिया तथा सेवायें है जिसके अन्तिम उत्पाद / सेवायें जिनको :**

- भारत से बाहर वितरित करने के लिए
- संचार जाल के लिए वितरित करने के लिए; तथा
  या तो बाहरी टेके (बाहरी स्त्रोत) या उस कम्पनी के सुदूर गौण द्वारा उपलब्ध किया हुआ (बाहर अवस्थित

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टिप्पण :–

सेवाएं जो इनमें शामिल नहीं हैं, :

- सुदूर उत्पादन / विनिर्माण इकाइयां
- कम्पनियों के निगमित कार्यालय अथवा उनकी स्थानीय शाखाएं
- इन्टरनैट पर वास्तविक व्यवसाय

निम्नलिखित सेवाएं जो उपरोक्त दिये गये मानदण्ड पूर्ण करती हैं, सम्मिलित होंगी :

(i) बैंक ऑफिस आप्रेशन्स
(ii) काल सैन्टरज़
(iii) कोन्टैन्ट डिवैल्पमैन्ट अथवा एनीमेशन
(iv) डाटा प्रोसैसिंग
(v) अभियान्त्रिकी तथा रचना
(vi) ज्योग्राफिक इन्फोरमेशन सिस्टम सर्विसिज
(viii) मानव संसाधन सेवायें
(ix) बीमा दावा प्रोसेसिंग
(x) लीगल डाटा बेस
(xi) मैडीकल ट्रान्सक्रिप्शन
(xii) पे–रोल
(xiii) सुदूर रख–रखाव
(xiv) राजस्व लेखाकरण
(xv) वैब–साईट सर्विसेज

एस० एन० रॉय,
अपर मुख्य सचिव, हरियाणा सरकार,
शहरी स्थानीय निकाय विभाग।

अपूर्व कुमार सिंह,
प्रधान सचिव, हरियाणा सरकार,
नगर तथा ग्राम आयोजना विभाग।

HARYANA GOVERNMENT

TOWN AND COUNTRY PLANNING DEPARTMENT

AND

URBAN LOCAL BODIES DEPARTMENT

Notification

The 3rd June, 2020

No. C.C.P.(N.C.R.)/DDP/Uklana/2020/498.— In exercise of the powers conferred by sub-section (4) of section 5 of the Punjab Scheduled Roads and Controlled Areas Restriction of Unregulated Development Act, 1963 (Punjab Act 41 of 1963) and sub-section (5) of section 203 C of the Haryana Municipal Act, 1973 (24 of 1973), the Governor of Haryana hereby publishes the following Draft Development Plan-2031 AD for Uklana, along with restrictions and conditions, given in Annexures A and B proposed to be made applicable to the controlled areas specified in Annexure B.

Notice is hereby given that the Draft Development Plan shall be taken into consideration by the Government on or after expiry of a period of thirty days from the date of publication of this notification in the Official Gazette together with objections and suggestions, if any, which may be received by the Director, Town and Country Planning Department, Haryana, Block A, Nagar Yojna Bhawan, Plot No. 3, Sector-18, Chandigarh (for the area falling outside Municipal Committeelimit) and Director, Urban Local Bodies Department, Haryana, Bays No. 11 – 14, Sector – 4, Panchkula, (for the area falling within Municipal Committee limit) from any person with respect to the Draft Development Plan, before the expiry of the period so specified.

Drawings

1 Existing land use plan Drawing No. DTP(H) 3550/2011, dated the 23rd February, 2011.

2. Draft Development Plan 2031 A.D. Uklana bearing Drawing No. DTP (H) 3652/2017, dated the 26th July 2017/ 28th August, 2018/5th July, 2019.

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ANNEXURE-A

Explanatory note on the Draft Development Plan for controlled area Uklana - 2031 AD.

I INTRODUCTION:

Historically not much is known about Uklana. Uklana town can be associated to the ancient Harappan culture as per excavations from the nearby Ther (mounds). The area has also been associated with ancient Vedic culture tribes such as Bharatas, Purus, Kurus, Mujavats etc. During medieval times the area was ruled by the Mughal Empire and it went through commotions and downfalls. Uklana was ruled by the Mughals and was later taken under the administration of the British until India's Independence in 1947. Morphology of the town is marked by narrow lanes, old brick, mosques and local depressions which have taken in the shape of ponds.

II Location and Situation:

Uklana town is located at 29°-31' North latitudes and 75°-52' East longitudes at an elevation of 221 metres above from mean-sea-level. Uklana is an old town situated at a distance of 50 kilometres in the north of its District main city Hisar, on Hisar- Jakhal railway line and Sirsa-Chandigarh road. Uklana town is a sub tehsil of Distt. Hisar. This town is directly connected to adjoining villages and other towns i.e. Bhuna, Tohana, Narwana and Barwala.

III Climate:

Uklana town is located in the semi-arid climate region. Normally the South West current of summer monsoon brings the rains during the month of July to September. Thereafter, the weather remains mostly dry except for a few intermittent showers due to westerly depression. During summer, as a typical phenomenon of this region, dust-norms are most frequent and during winter January is a frost prone month.

IV Population Growth:

Population of the town is growing with marked variations in every decade, because the village namely Budhakhera, Surewala, Mugalpura, Prabhuwala and Bhairi Akbarpur became the part of the town. The table-I reveals the trend of population growth of Uklana town.

YEAR	POPULATION	
1971	14832	
1981	17533	
1991	23104	
2001	29274	
2011	34974	
2021	54209	Projected population
2031	98974	Projected population
	Say to 99000	

Hence Table-I indicates that after 1971, the population of the town increased substantially during 1981-91, the population of the town has increased from 17533 to 23104 persons i.e an increase of 31.77%. Considering the average increase of population in the last four decades, the town is planned for a population of 99000 by the year of 2031 AD .

V. Study of existing infrastructure:

(i) Agriculture and Allied:

Since, Uklana has a very fertile hinterland, its economy depends upon trade and commerce and other services. The trade and commerce has an important role to play in supporting the economy of Uklana in up coming years. Food Corporation of India had already constructed godowns for storage of grain.

(ii) Industries:

In 1981, industries shared only 2.5% of total workers, Majority of Industrial establishment are agro based like rice shellers, cotton ginning, flour mills etc.

(iii) Education and Medical Institutions:

There is one Government degree college for girls, two senior secondary schools, one middle school, four primary school for boys and girls. Besides above one polytechnic institute and 10 schools are being run by private organizations. Among medical facilities, one Civil hospital of 30 beds and two dispensaries, ten nursing homes are serving the town and its surrounding villages.

(iv) Community facilities:

There are two dharamshalas for public, one park measuring approx. one acre in existence to serve the population of Uklana.

(v) Water supply and driange:

The main source of water supply is canal based. Except some area the underground water is brackish. Two waterworks have been constructed by Public Health Deptt. in Uklana. And separate water works

have also been constructed in the adjoining villages. Sewarage is laid down on 75% area of Uklana. There is no sewarage treatment plant at Uklana. Public latriness, urinals and dustbin are not properly provided. There is lack of drainage system, as a result water stagnates in ponds during rainy season.

(vi) Railways:

Like roads, Uklana town is well connected by railways also with other neighbouring centres. It has broadgauge railway route which links it with Tohana, Jakhal, Sangrur, Ludhiana, Barwala & Hisar.

(vii) Availability of Power:

At present there is a 132 KV sub station at village Buda Khera

VI. Land Use proposals:

To meet the requirement of various socio-economic activities in the town, land is rationally allocated to different land uses taking in account of the nature of town as a whole and the relationship between the places of work, living and recreation. The projected population of Uklana town will be 99000 persons by 2031 A.D. assuming as average population growth rate of 68.5 per cent.

LAND USES

Serial number	Land use category	Area within M.C Boundary(in hect.)	Total area (in hect.)	% age
1	Residential	41.91	491.00	49.30
2	Commercial	25.82	53.00	5.32
3	Industrial	22.76	82.00	8.25
4	Transport and Communication	2.98	140.00	14.05
5	Public utility	19.70	51.00	5.12
6	Public and Semi-public	-	88.00	8.83
7	Open spaces	8.35	91.00	9.13
	Total Urbansible Area = propsed Area + Existing town		**996.00**	**100.00**

Note: Area under existing town is 235 hect. which includes in the residential proposal.

Description of landuses:

1. Residential:

The total area allocated for residential use is 256.00 hect. assuming density of 250 persons per hect. This includes the area of existing town and controlled area. The sectors designed for this land use are sector- 2 part, 3 part,4 part, sector 7and sector-8 and Existing sectors 1,4 (part), 6 (part) and 7 (Part). The following provisions have been made in the development plan and are given in the explanatory note as under :-

a. The additional area for infrastructure shall be provided in the already plan/developed residential sectors to meet out the requirement of additional population.

b. The minimum width of the road in a residential colony/sector shall not be less than 12 metres.

c. The minimum area for parks/open spaces in the residential colony/sectors shall be planed in a manner that it shall meet the minimum norm of 2.5 sq. metres per person.

d. Every residential sector shall be developed to the sector density indicated in the drawing with 20% variation on either side and in addition to it, the density as prescribed in the New Integrated licensing Policy (NILP), Deen Dayal Awaas Yojana Policy (DDJAY) and Affordable Group Housing Policy. 20% Group Housing Component policy will also be applicable in a residential sector.

2. Commercial:

Uklana has a grain market over an area measuring 25.82 hect. developed by HSAMB in sector-3- (part) along Uklana-Narwana road. The retail trade is concentrated in the old congested streets in the form of ribbon development. To meet the future requirements sector-3 in an area measuring 16.69 hect., is reserved for commercial use.

3. Industrial zone:

82.00 hect. land has been proposed for industrial use in sector- 4 part and 5 along V-2 road in North side. The land is allocated on the basis of existing trend of industrial development.

4. Transport and Communication:

22.00 hect. land has been proposed for road , transport depots and parking areas in sector-4-(part). The major road system adopted on a grid-iron pattern which integrates well with the existing road hierarchy. The Bhuna-Narwana road and Surewala chowk to Tohana is a Scheduled Road. Along this road no construction/excavation what

so ever in nature will be allowed on both sides within 30 metres in urbanisable limit. One peripheral road (V-2) is proposed along the outer demarcation of sectors 2, 3, 4, 5, 6, 7 and 8 having width of 45 metres with 30 metres green on outer side. The road width prescribed for various roads is as given below.

Serial number	Type	Name	Land reservation
(i)	(V-1)	Hisar-Ambala road (National Highway Number- 52)	Existing width, 30 mtr. Green belt on both sides out side M.C. Limit.
(ii)	(V-1A)	Scheduled road (Bhuna-Narwana)	Existing width with 30 metres wide green belt on both sides out side M.C. Limit.
(iii)	(V-1-B)	Surewala Chowk to Tohana. (National Highway Number - 148B)	Existing width with 30 metres wide green belt on both sides out side M.C. Limit.
(iv)	(V-2)	Peripherial road.	45 mtr. Wide with 30 mtr. Green belt on outer sides.
(v)	(V-3)	Sector road.	45 Mtr. Wide.
(vi)	(V-4)	Existing / village link road	Existing width

5. Public utilities:

This use will accommodate water supply installations disposal works and electric sub-station etc. Total area under this zone is 51.00 hect.. Two water works are already exists in Uklana having an area of 3.2 hect.. To meet the demand of the required water supply, an additional land of 8 hect. is earmarked for water works in sector-6. About 8.25 hect. of land is reserved for sewerage treatment plant and solid waste disposal in agriculture zone. Drinking water will be made available from Uklana minor to serve the projected population of city.

6. Public and semi public use:

An area of 88.00 hect. is earmarked for this use in sector-2part, 3 part and a Govt. college is already constructed and a senior secondary school (Arohi) is operational at this stage.

7. Parks and open spaces:

An area of 21.50 hect. (approx) for park is proposed in sector-2 adojoining to existing abadi and an area measuring20.00 hect. for another park is earmarked along Peripherial road in sector-6. The total area 91.00 hect. is reserved for open spaces and green belt. There are 2 to 3 ponds also exists in the existing town which have been marked on the plan as 760 code

8. Agriculture Zone:

The remaining area surrounding the urbanization proposals, which is predominantly agricultural, is proposed to be reserved as agriculture zone. An agriculture zone, however, would not eliminate the essential building activities within this area, such as the extension of the existing village contiguous to abadi-deh, if undertaken under project approved or sponsored by Government, and ancillary facilities necessary for the maintenance and improvement of this rural area

9. Zoning Regulations:

The legal sanctity to the proposals regarding land use is being given to the effect by a set of zoning regulations which form a part of this development plan. These regulations will govern the change of land use and standards of development. They also very elaborately detail out allied and ancillary uses which will be permitted in the various major and uses and stipulate that all change of land use and development shall be in accordance with the details shown in the sector plan thereby ensuring the preparation of detailed sector plans for each sector to guide the development and enforce proper control.

ANNEXURE - B

Governing use and development of land in the Controlled Areas of Uklana as shown in Draft Development Plan Drawing No DTP (H) 3652/2017, dated the 26th July 2017/ 28th August, 2018/5th July, 2019.

I. General :-

1. These zoning regulations forming part of the Draft Development Plan for the controlled areas around Uklana shall be called zoning regulation of Draft Development Plan for the controlled areas.
2. The requirements of these regulations shall extend to the whole of the area covered by the Draft Development Plan and shall be in addition to the requirements of the Haryana Municipal Act, 1973 (Act 24 of 1973) and Punjab Scheduled Roads and Controlled Areas Restriction of Unregulated Development Act, 1963 (Punjab Act 41 of 1963) and the rules framed there under.

II. Definitions: -

In these regulations:-

(a) **'Agro based Industries'** means an industrial unit, which uses food grains, fruits or Agro waste as raw-material;

(b) **'Approved'** means approved by the competent authority;

(c) **'Building Code'** means, the Haryana Building Code 2017;

(d) **'Building rules'** means the rules contained in part VII of the rules;

(e) **'Cyber City'** means self contained intelligent city with high quality of infrastructure, attractive surrounding and high speed communication access to be developed for nucleating the Information Technology concept and germination of medium and large software companies Information Technology Enabled services; wherein no manufacturing units may be allowed;

(f) **'Cyber Park/Information Technology Park'** means an area developed exclusively for locating software development activities, and Information Technology Enabled services wherein no manufacturing of any kind (including assembling activities) shall be permitted;

(g) **'Drawing'** means Drawing No. DTP (H) 3652/2017, dated the 26th July 2017/ 28th August, 2018/5th July, 2019.

(h) **'Extensive Industry'** means an industry set up with the permission of the Government and in extensive, employing more than 100 workers and may use any kind of motive power of fuel provided they do not have any obnoxious features;

(i) **'Farm House'** means a house constructed by the owner of a farm at his land for the purpose of:

(i) Dwelling unit, i.e. main use,

(ii) Farm shed i.e. Ancillary use.

Notes:-

(1) The construction of the farm house shall be governed by the restrictions given under clause XIX regarding 'provision of farm houses outside adadi- deh in agricultural zone'.

(2) 'Farm sheds' shall be governed by the restriction mentioned in clause XIX regarding building control and site specifications.

(j) **'Floor Area Ratio (FAR)'** means a quotient obtained by dividing the multiple total covered area of all floors and hundred, by the area of plot i.e.

$$\text{FAR} = \frac{\text{total covered area}}{\text{plot area}} \times 100$$

For the purpose of calculating FAR, cantilevered permitted roof projections, lift room, mumty, balcony, basement or any floor if used for parking, services and storage, stilt area (unenclosed) proposed to be used for parking and pedestrian plaza only, open staircase (without mumty), terrace with or without access, fire staircase, atrium, water tank, open court yard of permitted size shall not be counted towards FAR:

Provided that area under shaft, chutes, lift well and staircase from stilt to next floor shall be counted towards FAR only at once on ground floor:

Provided further that in case the ventilation shaft area is more than 3 square metres, it shall not be counted in FAR;

(k) **'Fuel Station'** means the fuel filling station providing retail supply of fuel for automobiles which shall include petrol pumps, CNG station, bio- fuels, charging station, battery providing stations etc;

(l) **'Green Belt'** shall mean, strips of land along sector/arterial road shown in the development plan primarily meant for the widening of the sector/arterial road in future

(m) **'Group Housing'** means a building designed and developed in the form of flats for residential purpose or any building ancillary to group housing;

(n) **'Heavy Industry'** means an industry to be set up in public or semi public or private sector with the permission of the Government (the cost of plant machinery etc. as defined in the industrial policy of the Government);

(o) **'Information Technology Industrial Units'** means the categories of industries included in the Annexure to the Government of Haryana Information Technology Policy, 2000 and in Appendix-1 to this notification and/or, as may be defined by the Government of Haryana from time to time;

(p) **'Ledge or Tand'** mean a shelf-like projection, supported in any manner whatsoever, except by means of vertical supports within a room itself but not having projection wider than one metres;

(q) **'Light Industry'** means industry not likely to cause injurious or obnoxious noise, smoke, gas, fumes or odors, dust, effluent and any other nuisance to an excessive degree and motivated by electric power;

(r) **'Local Service Industry'** means an industry, the manufacture and product of which is generally consumed within the local area, for example: bakeries, ice-cream manufacturing, aerated water,

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attachakkies with power, laundry, dry cleaning and dyeing repair and service of automobile, scooters and cycles, repair of household utensils, shoe making and repairing, fuel depots etc. provided no solid fuel is used by them.

(s) **'Loft'**shall mean an intermediate space between two floors on a residual space with maximum height of 1.5 metres and which is constructed or adopted for storage purposes only;

(t) **'Material Date',**'material date' means the date of publication of notification of various controlled areas declared as under:

Serial number	Name of the controlled area and notification No.	Material date
1	Controlled Area notified *vide* Haryana Government Gazette notification No.CCP(NCR)/HSR-Uklana/CA/ 2009/2714 dated 07-10-2009 published on 07-10-2009.	07th October, 2009

(u) **'Medium Industry'** means all industries other than Light Industry and Local Service Industry and not omitting obnoxious or injurious fumes and odours;

(v) **'Mezzanine floor'** means an intermediate floor, between two floors, with area restricted to ½ (half) of the area of the lower floor and with a minimum height of 2.3 metres and shall not be lower than 2.3 metres (clear height) above floor level;

(w) **'Non-conforming use'**in respect of any land or building in a controlled area means the existing use of such land or building which is contrary to the major land use specified for that part of the area in the Draft Development Plan.

(x) **'Obnoxious or 'Hazardous Industry'** means an industry set up with the permission of the Government and is highly capital intensive associated with such features as excessive smoke, noise, vibration, stench, unpleasant or injurious effluent, explosive, inflammable material etc. and other hazards to the health and safety of the community.

(y) **'Public Utility Service Building'** means any building required for running of public utility services such as water supply, drainage, electricity, post and telegraph and transport and for any municipal service including a fire station.

(z) **'Rules'** the Rules framed under the Punjab Scheduled Roads and Controlled Areas Restriction of Unregulated Development Rules, 1965.

(za) **'Sector Area'** and **'Colony Area'** shall means the area of sector or of colony indicated as such in the Development Plan;

Explanation:-

(1) In this definition the 'Sector Area' or 'Colony Area' shall mean the area of the Sector or of Colony as shown on the drawing on the approved layout plan of the colony/sector which will be excluding the area unfit for building development within the sector or the colony as the case may be.

(2) Benefit of 50% of the area falling under major roads and their adjoining green belts, if any, shall be allowed for plotable area/floor area ratio (FAR) in case of plotted/group housing colony;

(3) In the layout plan of colony or sector, other than industrial colony/sector, the land reserved for roads, open space, schools, public and community building and other common uses shall not be less than 45% of the gross area of the land under the colony/sector;

(4) For the purposes of calculation of sector density or colony density, it shall be assumed that 50 percent of the sector area or colony area will be available for residential plots including the area under Group Housing and that every building plot shall on the average contain three dwelling units each with a population of 4.5 persons per dwelling unit or 13.5 persons building plot or as incorporated in the zoning plan of the colony/group housing complex. In the case of shop-cum-residential plot, however, only one dwelling unit shall be assumed;

(5) Notwithstanding above, the projects approved under specific policy like New Integrated Licensing Policy; Floor Area Ratio and density shall be the governing parameters instead of plotable area;

(zb) **'Sector Density'** and **'Colony Density'** shall mean the number of persons per hectares in sector area or colony area or colony area as the case may be;

(zc) **'Site Coverage'** means ratio expressed in percentage between the area covered by the ground floor of building and the area of the site;

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(zd) **'Small Scale Industries'** means Industrial unit, which is registered as Small Scale Industry by the Industries Department.

(ze) **'Subservient to Agriculture'** mean development and activities, which are required to assist in carrying out the process of "agriculture" such as tubewells, pump chambers, wind mills, irrigation drains, pucca platform, fencing and boundary walls, water hydrants etc;

(zf) The terms **'Act', 'Colony', 'Colonizer', 'Development Plan', 'Sector'**and **'Sector Plan'** shall have the same meaning as assigned to them in the Punjab Scheduled Roads and Controlled areas Restriction of Unregulated Development Act, 1963 (Punjab Act 41 of 1963) and rules, 1965 framed there under.

(zg) Any other term shall have the same meaning as assigned to it in the Punjab Scheduled Roads and Controlled Areas Restriction of Unregulated Development Act, 1963, (Punjab Act 41 of 1963) and the rules 1965 framed there under;

III. (1) Major Land Uses/Zone :

(i) Residential zone
(ii) Commercial zone
(iii) Industrial zone
(iv) Transport and communication zone
(v) Public Utility Zone
(vi) Public and semi public zone (institutional zone)
(vii) Open spaces zone
(viii) Agriculture zone

(2) Classification of major land uses is according to Appendix A.

IV. Division into sectors :

Major land uses mentioned at Serial No. (i) to (viii) in zoning regulation-III above, which are land uses for building purposes, have been divided into sectors as shown on the concerned development plan drawing and each sector shall be designated by specific number as indicated on the drawing.

V. Detailed land uses within major uses :

Main ancillary and allied uses, which are subject to the other requirements of these regulations and of the rules, may be permitted in the respective major land use zone are listed in Appendix B sub-joined to these zoning regulations.

VI. Sector not ripe for development :

Notwithstanding the reservation of various sectors for respective land uses for building purposes, the Director may not permit any changes in their land use or allow construction of building thereon from considerations of compact and economical development of the controlled area, till such time as availability of water supply, drainage arrangement and other facilities for the sectors are ensured to his satisfaction.

VII. Sectors to be developed exclusively through government agencies/instrumentalities :

Government may notify any sector for development exclusively by it or by its agencies, in which case, no further permission for change of land use or grant of licence shall be permitted in such sectors.

VIII. Land reservation for major roads :

(1) Land reservation for major roads marked in the Drawing shall be as under :-

Serial number	Type	Name	Land reservation
(i)	(V-1)	Hisar-Ambala road (National Highway No. 52)	Existing width, 30 mtr. Green belt on both sides out side Municipal Committee Limit.
(ii)	(V-1A)	Schedule road (Bhuna-Narwana)	Existing width with 30 metres wide green belt on both sides out side Municipal Committee Limit.
(iii)	(V-1-B)	Surewala Chowk to Tohana. (National Highway No. 148B)	Existing width with 30 metres wide green belt on both sides out side Municipal Committee Limit.
(iv)	(V-2)	Peripherial road.	45 mtr. Wide with 30 mtr. Green belt on outer sides.
(v)	(V-3)	Sector road.	45 mtr. Wide.
(vi)	(V-4)	Existing / village link road	Existing width

(2) Width and alignment of other roads shall be as per sector plans or as per approved layout plans of colonies.

(3) Benefit of tradable Floor Area Ratio, may be allowed against licences granted for the land falling under sector road or green belt and open space zones in accordance with specified policies.

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IX. Non-conforming uses either existing or having valid charges of land use permission :

1. With regard to the existing industries shown in the zones other than industrial zone in the development plan, such industrial non-conforming uses shall be allowed to continue for a fixed period to be determined by the Director, but not exceeding ten years, provided that the owner of the industry concerned:
   (a) Undertakes to pay to the Director, as determined by him the proportionate charges, toward, the external development of the site as and when called upon by the Director to do so in this behalf;
   (b) During the interim period makes satisfactory arrangement for discharge of effluent to the satisfaction of the Director.
   (c) Shall not be allowed to expand the existing project within the area of non-conforming use.
2. With regard to the projects having valid change of land use permission and located in the zones other than conforming use zone in the development plan, such non-conforming uses shall be allowed to continue, provided that the owner of the building concerned:
   (a) undertakes to pay to the Director, as determined by him the proportionate charges, toward, the external development of the site as and when called upon by the Director to do so in this behalf; and
   (b) During the interim period makes satisfactory arrangement for discharge of effluent to the satisfaction of the Director.

X. Discontinuance of non-conforming uses :

1. If a non-conforming use of land has remained discontinued continuously for a period of two years or more, it shall be deemed to have terminated and the land shall be allowed to be re-used or re-developed only according to the conforming use.
2. If a non-conforming use building is damaged to the extent of 50 percent or more of its re-production value by fire, flood, explosion, earthquake, war, riot or any other natural calamity, it shall be allowed to be re-developed only for a conforming use.
3. After the discontinuance of projects included under clauses IX, the land shall be allowed to be redeveloped or used only for conforming use.
4. After a lapse of period fixed under clause IX(1) the land shall be allowed to be re-developed or used only for conforming use.

XI. The development to conform to sector plan and zoning plan :

Except as provide in regulation IX, no land within major land use shall be allowed to be used and developed for building purposes unless the proposed use and development is according to the details indicated in the sector plan and zoning plan or the approved colony plan in which the land is situated.

XII. Individual site to form part of approved layout or zoning plan :

No permission for erection or re-erection of building on a plot shall be given unless,-

(i) the plot forms a part of an approved colony or the plot is in such area for which relaxation has been granted as provided in regulation XVII; and

(ii) the plot is accessible through a road laid out and constructed up to the situation of the plot to the satisfaction of the Director.

XIII. Minimum size of plots for various types ofbuildings :

(1) The minimum size of the plots for various types of uses shall be as below:

Serial number	Land Use	Size		
i.	Residential plot	50 Square meters	59.8 square yard	538.20 square feet
ii.	Residential plot on subsidized industrial housing or slum dwellers housing scheme approved by the Government	35 Square meters	41.86 square yard	376.74 square feet
iii.	Shop-cum-residential plot	100 Square meters	119.60 square yard	1076.40 square feet
iv.	Shopping booths including covered corridor or pavement in front	20 Square meters	23.92 square yard	215.28 square feet
v.	Local service industry plot	100 Square meters	119.60 square yard	1076.40 square feet

vi.	Light industry plot	250 Square meters	299 square yard	2691 square feet
vii.	Medium industry plot	8000Square meters	9568 square yard	86112 square feet

(2) The area norms for group housing colony plotted residential colony and commercial colony shall be in the accordance with the policies specified from time to time for residential and commercial development. However, in a case group housing scheme is floated by Haryana Shahari Vikas Pradhikaran or any other Government Agency, the size of group housing site shall be as specified in the scheme.

XIV. Site coverage/ height and bulk of building under various types of buildings :

The site coverage, Floor Area Ratio and height permitted on a specific plot/site shall be governed by the prescribed policy parameters, building code/rules and /or as laid down in the zoning plan of such plot/site.

XV. Building lines in front side and rear of building :

These shall be provided in accordance with building code/rules and /or as laid down in the zoning plan of such site.

XVI. Architecturalcontrol :

Wherever architectural control is considered necessary, every building shall conform to architectural control prepared as per clause 6.4 of Haryana Building Code 2017.

XVII. Relaxation of agricultural zone :

In the case of any land lying in Agriculture zone, Government may relax the provisions of this development plan:-

(a) for use and development of the land into a residential or industrial colony provided the colonizer has purchased the land for the said use and developed prior to the material date and the colonizer secures permission for this purpose as per Rules.

(b) for use of land as in individual site (as distinct from an industrial colony).

Provided that:

(i) the land was purchased prior to the material date;

(ii) the Government is satisfied that the need of the industry is such that it cannot await alternative allotment in the proper zone;

(iii) the owner of the land secures permission for building as required under the Rules;

(iv) the owner of the land undertakes to pay to the Director as determined by him, the proportionate charges as and when called upon by the Director in this behalf and during the interim period makes satisfactory arrangement for discharge of effluent.

Explanation :

The word purchase in the regulation shall mean acquisition of full property right and no lesser title, as agreement to purchase etc.

XVIII. Density :

Every residential sector shall be developed to the sector density indicated in the drawing with 20% variation on either side and in addition to it, the density as prescribed in the New Integrated Licensing Policy, Deen Dayal Jan Awaas Yojna Policy and Affordable Group Housing policy. 20% Group Housing component policy shall also be applicable in a residential sector.

XIX. Provision of farm house outside abadi- deh in agricultural zone :

Farmhouses shall be allowed only for bonafide use of landowner(s) provided he does not own a house in any urban area because the real object for allowing farmhouses in agriculture zone is to meet the housing needs of the farmers on a small portion of the farm so that he can take care of his agriculture produce while living on that farm. Hence, a farm house in agriculture zone, outside abadi-deh may be allowed if the area of the land is 2 acres or more on the following conditions :-

	Size of farm house	Main building of the dwelling unit	Ancillary building of main dwelling unit
(i) Site Coverage	2 Acres minimum but CLU permission for the area falling under road reservation/ proposed road widening as per Development Plan, shall not be considered. However the net area should not be less than	As applicable to residential plot equivalent to 250 sq.yds.	1 percent of the farm (not more than 40 % shall be used for labor/servant quarters)

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	1.5 acres after excluding the area falling under the green belt/restricted belt and falling in Agriculture zone from applied area of 2 acres.		
	Upto 3 acres	As applicable to residential plot equivalent to 375 sq. yds.	-do-
	Upto 4 acres and above	As applicable to residential plot equivalent to 500 sq. yds.	-do-
(ii) Height and Storey		11 meters, three storeyed	4 meters single storey.

(iii) Set back:

It shall be at least 10 meters away from the edge of the agricultural land on all sides provided that if land attached to the farm house abuts a road, the house shall be constructed with a minimum set back from the edge of the road as under:

Serial Number	Road	Width
(a)	Where the road is bye pass to a Scheduled Road.	100 meters.
(b)	Where the road is a Scheduled Road Plan.	30 meters or a shown in the Development
(c)	Any other road.	10 meters.

(iv) Approching road:

Any revenue rasta/ road as defined in the revenue record.

(v) Basement:

Basement shall be permitted to the maximum extent of ground floor coverage and uses are permitted as per the Haryana Building Code-2017.

(vi) Ledge, Loft and mezzanine floor:

Ledge, loft and mezzanine floor shall be permitted within the building subject to the restrictions above as well as the restrictions stipulated in the definition given in clause –II of zoning regulations of Development Plan.

(vii) Service water supply and drainage:

(a) Good potable water supply should be available in the farm for human consumption in case farm house is built.

(b) Open sanitary drains or covered drains to be provided to clean the sheds in case of Dairy farms, Drains are to be provided for carrying rain water in case of all buildings.

(c) Septic tank to be provided for disposal of human and animal waste as per provisions of Rules.

(d) The distance between the septic tank and open well or tubewell shall be as provided in the Rules.

(viii) The owner shall be permitted to construct boundary wall around the main dwelling unit and ancillary portion thereof and around remaining area of farm barbed wire fencing shall be allowed.

(ix) The CLU permission for setting up of farmhouse shall be considered in the area other than over exploited or critical areas as declared by Central Ground Water Board.

Provided that Government may amend the minimum size of the farm for any schemes sponsored by the State Government/State agency for the proper utilization of the agriculture zone.

XX. Provision of information technology units and cyber parks/cyber cities :

(i) Location :

(a) Information Technology Industrial Units will be located in Industrial Areas / Industrial Zones only;

(b) Cyber Parks/Information Technology Parks will be located either in Industrial Areas or Industrial abutting sector roads in the form of integrated development. However, no manufacturing units will be permitted in such parks.

(c) Cyber Cities:- The location of such a facility will be decided by the Government;

(ii) **Size :**

Serial Number	Type	Size
1	Information Technology Industrial Unit	1 to 5 acres
2	Cyber Park / Information Technology Park	5 to 15 acres
3.	Cyber City	minimum 50 Acres

(iii) **Miscellaneous :**

I **Parking :**

Parking will be as per the provisions of Haryana Building Code 2017 as amended from time to time.

II **Other Activities :**

(a) Incidental commercial activities like Banks, Restaurants, Insurance Offices etc. shall be permitted subject to restriction of 4% of the gross area of the Cyber Park/Information Technology Park;

(b) Only 5% of the area of the Cyber City shall be allowed for Group Housing and 4% of the total area of the Cyber City shall be permitted for Commercial/Institutional uses.

(c) No residential plotted development shall be allowed in a Cyber City;

(d) For a Cyber City Project if allowed in Agricultural Zone, the entrepreneur shall make the arrangement of water supply and other facilities like sewerage disposal/drainage etc;

III The Government may impose any other condition as deemed necessary from time to time.

XXI. Setting up of communication towers :

Permission of Mobile Towers within the Controlled area shall be granted as per the policy instructions of Departments memo dated 10.03.2015 and as amended from time to time.

XXII. Safety against seismic hazards :

As the Development Plan area falls in Zone III as per Seismic Zone map of Indian Standard IS 1893:2002 and hence is considered as High Risk Zone. In order to take care of the same "the whole urban development shall be checked for safety against intensity "VII" probability of occurrence, and upgraded for required seismic resistance in buildings and infrastructure as found necessary.

XXIII. Brick klins in controlled areas :

Sitting of the brick kilns in the Controlled Areas shall be governed by the respective policy/ guidelines issued by the Competent Authority from time to time.

XXIV. Relaxation of development plan :

Government may in case of hardship or with a view to save any structure constructed before the material date, relax any of the provisions of the development plan on principles of equity and justice on payment of such development charges and on such other conditions as it may deem fit to impose.

APPENDIX A

Classification of land uses

Main code	Sub code	Main group	Sub group
100		**Residential**	Residential Sector on neighborhood pattern
200		**Commercial**	
	210		Retail Trade
	220		Wholesale Trade
	230		Warehousing and Storage
	240		Office and Banks including Government Office
	250		Restaurants, Hotels and Transient Boarding Houses including public assistance institutions providing residential accommodation like Dharamshala, Tourist House etc.
	260		Cinema and other places of public assembly on a commercial basis.
	270		Professional Establishments

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300		**Industrial**	
	310		Service industry
	320		Light industry
	330		Extensive industry
400		**Transport and Communication**	
	410		Railway yards, railway station and sidings.
	420		Roads, Road Transport Depots and Parking Areas
	450		Telegraph offices, Telephone Exchanges etc
500		**Public Utilities**	
	510		Water Supply installation including treatment plants
	520		Drainage and Sanitary installation including disposal works
	530		Electric power plants substation etc.
	540		Gas Installation and Gas work.
	550		Solid Waste Management sites.
600		**Public and semi public**	
	610		Government Administrative Central Secretariat District Offices, Law Courts, Jails, Police Stations, Governors and President's Residence.
	620		Education, Cultural and Religious Institutions
	630		Medical and Health Institutions
	640		Cultural institution like Theatres, Opera Houses etc. of a predominantly non commercial nature
700		**Open Spaces**	
	710		Sports Grounds, Stadium and Play Grounds
	720		Parks
	730		Green Belts, Garden and other Recreational Uses.
	740		Cemetreies, crematories etc
	750		Fuel stations and Bus Queue shelters
	760		Water Bodies/lakes
800		**Agricultural land**	
	830		Land under staple crops
	850		Forest land.
	880		Land under water
	890		Dairy farming

APPENDIX B

The permissible activities given under main land uses shall be allowed in accordance with the policy/parameters approved by the Government and/or at sites as approved by the Competent Authority in the Sector/Colony/Scheme Plan.

I. Residential zone :

(i) Residence

(ii) Social community religious and recreational buildings

(iii) Public utility buildings

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(iv) Educational buildings and all types of school and college where necessary.
(v) Health institutions.
(vi) Cinemas
(vii) Commercial and professional offices.
(viii) Retail shops, dhabas and restaurants.
(ix) Local service industries.
(x) Fuel stations.
(xi) Bus stops, tonga, taxi, scooter and auto/rickshaw stand.
(xii) Nurseries and green houses.
(xiii) Any other minor needs to ancillary to residential use
(xiv) Starred hotels
(xv) Clubs/Community Centres
(xvi) Communication Towers
(xvii) Guest/Boarding Houses
(xviii) Any other use, which the Government may in public interest decide.

II. Commercial zone :

(i) Retail Trade.
(ii) Wholesale Trade.
(iii) Warehouses and storages.
(iv) Commercial offices and banks.
(v) Restaurant and Transient Boarding Houses including public assistance institutions providing residential accommodation like Dharamshala, Tourist House etc.
(vi) Cinemas, Hotels, Motels and other places of public assembly like theatres, club, Dramatic Club, etc. run on commercial basis.
(vii) Professional establishments.
(viii) Residences on the first and higher floors.
(ix) Local service industry.
(x) Public utility buildings.
(xi) Fuel stations and service garages.
(xii) Loading and unloading yards.
(xiii) Parking spaces, bus stops, taxis, tonga, auto/rickshaw stand.
(xiv) Town parks.
(xv) Communication Towers
(xvi) Any other use, which the Government in public interest may decide.

III. Industrial zone :

(i) Light industry
(ii) Medium industry
(iii) Obnoxious and Hazardous Industry
(iv) Heavy industry
(v) Service industry
(vi) Warehouse and storages
(vii) Parking, loading and unloading area
(viii) Truck stand/bus stops, taxi, tonga and auto/rickshaw stand
(ix) Public utility, community buildings, retail shops, banks, dhabas, restaurants, two/three/five star hotels and insurance offices subject to a maximum limit of 3 percent of the total area of the sector as under: -

Serial Number	Name of Facility	Area		No. of facilities in a sector	Commercial component	Maximum Ground Coverage	Floor Area Ratio	Approach Road
		Minimum	Maximum					
1	Dhabas	500 sq. m.	1000 sq m	2	50 sqm	40 %	40%	Minimum 18 metres
2	Restaurants	1000 sq. m.	2000 sqm	2	10 %	30 %	150%	Minimum 18 metres

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Serial Number	Name of Facility	Area		No. of facilities in a sector	Commercial component	Maximum Ground Coverage	Floor Area Ratio	Approach Road
		Minimum	Maximum					
3	Two/ Three Star Hotels	1.0 Acre	2.5 Acres	2	15 %	30 %	As per commercial policy	Minimum 24 metres
4	Five Star Hotels	2.5 Acres	4.0 Acres	1	15 %	30 %	As per commercial policy	Sector Dividing Road with the provision of a service road

(x) Fuel stations and service garages.

(xi) Liquid Petroleum Gas godowns permitted by the Director.

(xii) Cyber Parks/Information Technology Parks/ Information Technology Industrial Units

(xiii) Health Facilities like Hospital, Dispensary, Nursing Home and Clinic as under:

Serial Number	Name of facility	Area		No. of facilities in a sector	Residential component	Maximum ground coverage	Floor area ratio
		Minimum	Maximum				
1	Hospital	2.5 Acres	5.0 Acres	1	15 %	33 %	1.00
2	Dispensary	1.0 Acre	1.5 Acres	1	15 %	33 %	1.00
3	Nursing Home	250 sq. m.	500 sq. m.	2	Nil	60 %	1.00
4	Clinic	250 sq. m.	500 sq. m.	2	Nil	60 %	1.00

(xiv) Industrial Colony with a minimum area of 15 acres. The area utilization shall be as per policy issued *vide* ACS, T&CP, Haryana, Chandigarh memo No. Misc.388/PA(RB)/2015/7/16/2006-2TCP dated 01.10.2015 as amended upto date.

(xv) Communication Towers

(xvi) Ready mix concrete plant, wet mix plants, hot mix plants

(xvii) Weighing Bridge

(xviii) Service Garage, Sale/Display Centre-cum-service garage as under:-

Serial Number	Name of facility	Area (in acres)		Commercial component	Maximum ground coverage	Floor Area Ratio	Approach Road	Height
		Minimum	Maximum					
1	Service Garage	0.5	1	Nil	60%	1.25	Minimum 18 metres or service road along sector road	18 metres
2	Sale/Display Centre-cum-service garage	0.5	2	10% of permissible Floor Area Ratio	60%	1.25	Minimum 18 metres or service road along sector road	18 metres

Note: * The fee and charges on commercial component shall be levied on the commercial rates;

* Existing/already CLU granted service garages shall be considered for grant of permission for sale/display centre subject to fulfillment of the above norms.

(xix) Any other use, which the Government may, in public interest decide.

IV. Transport and Communication Zone :

(i) Railway yards, railway station and siding

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(ii) Transport Nagar, Roads and Transport depots/Bus stands and parking areas
(iii) Airports and Air Stations
(iv) Telephone exchange
(v) Broadcasting stations
(vi) Televisions station
(vii) Agricultural, horticulture and nurseries at approved sites and places
(viii) Fuel stations and service garages
(ix) Parking spaces ,bus stop-shelters, taxi, Tonga and auto/rickshaw stands
(x) Logistics Hubs/Container Yards, Inland Container Depot, Container Freight Station
(xi) Weighing Bridge
(xii) Communication Tower.
(xiii) Warehouses upto a maximum limit of 20% of the total area of the sector.
(xiv) Dhabas, as per prevailing policy.

V. Public Utilities :

(i) Water supply installations including treatment plants.
(ii) Drainage and Sanitary installations including sewerage treatment plants and Disposal works.
(iii) Electric Power plant and sub-station including grid sub-station.
(iv) Gas installations and Gas works.
(v) Solid Waste Management Sites

VI. Public and semi public uses zone :

(i) Government offices ,Government Administration centers, secretariats and police station
(ii) Educational, cultural and religious institutions
(iii) Medical health institutions
(iv) Civic/cultural and social institutions like theatres, opera houses etc. of predominantly non-commercial nature
(v) Land belonging to Defence
(vi) Dhabas, Restaurants as under: -

Serial Number	Name of Facility	Area		No. of facilities in a sector	Commercial component	Maximum Ground Coverage	Floor Area Ratio
		Minimum	Maximum				
1	Dhabas	500 sq. mtrs.	1000 sq. mtrs.	2	50 sq. m	50 %	40%
2	Restaurants	1000 sq. mtrs.	2000 sq. mtrs.	2	10 %	30 %	150%

(vii) Communication Towers
(viii) Fuel station
(ix) Any other use, which the Government may in public interest decide

VII. Open spaces :

(i) Sports ground, stadium and play grounds.
(ii) Parks and green belts, garden and other recreational uses.
(iii) Cemetreies crematories etc.
(iv) Fuel stations, bus queue shelter along roads with the permission of Director.
(v) Public utility services like electric grid station, transmission lines, communication lines, water supply lines, sewerage lines, drainage lines in the green belts along the scheduled roads and major roads.
(vi) Water bodies/ Lakes/water recharge zone.
(vii) Communication Towers.

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(viii) Mela Ground and Multipurpose Ground.

(ix) Any other use, which the Government may in public interest decide.

VIII. Agriculture zone :

(i) Agricultural, Horticultural, dairy and poultry farming.

(ii) Village houses within Abadi-deh

(iii) Farm houses outside abadi-deh subject to restrictions as laid down in zoning regulation XIX

(iv) Afforestation development of any of the part for recreation

(v) Expansion of existing village contiguous to abadi-deh if undertaken as a project approved or sponsored by the Central Government or State Government.

(vi) Milk chilling station and pasteurisation plant

(vii) Bus Stand and railway station

(viii) Air ports with necessary buildings

(ix) Wireless stations

(x) Grain godowns, storage space at sites approved by the Director

(xi) Weather stations

(xii) Land drainage and irrigation, hydroelectric works and tubewell for irrigation

(xiii) Telephone and electric transmission lines and poles

(xiv) Mining and extraction operations including lime and brick kilns, stones, quarries and crushing subject to the rules and at approved site

(xv) Cremation and burial grounds

(xvi) Fuel station and service garages

(xvii) Renewable and non-renewable energy power plants.

(xviii) Liquid Petroleum Gas storage godowns with the approval of the Director

(xix) Small Scale Industrial units shall be allowed subject to fulfillment of the following conditions, provided that the site should not fall within restricted belt notified under the 'Works Defence Act, 1903' around Defence installations, if any:

A. Siting norms		
Zone	Norms	
Low potential zone	Within 2 kms from Urbanisable Zone (excluding the peripheral roads, if proposed along urbansiable boundary)	Beyond 2 kms from Urbanisable Zone (excluding the peripheral roads, if proposed along urbansiable boundary)
	Non-polluting green, category units of any area	Green and orange category units of any area
B. Approach norms		
Medium and Low Potential zone	Minimum 30 ft wide revenue rasta/public road be considered for grant of CLU permission in agriculture zone for industrial use. However, in case industrial Change of Land Use permission stands granted on 5 karam (27.5 ft) wide revenue rasta/public road, then application for CLU permission on the said road, shall be considered subject to the condition that the project proponent donates 1 karam (5.5 ft) wide strip of the applied land to the Gram Panchayat/Local Authority through Hibbanama/gift deed so as to make the approach 6 karma (33 ft) in front of the applied site.	

(xx) Non polluting Medium and Large Scale Agro-based Industries on Public road/rasta not less than 30 feet wide other than scheduled roads, National Highway and State Highway subject to the condition that site should not fall within restricted belt around the defence installation as applicable for such installation if any.

(xxi) Dhabas, Banquet Hall, Small Restaurants, Motels, Hotels, Resort and Amusement Park/ Theme Park along National Highway / Scheduled Roads in the area outside restricted/ green belt as under:

Serial Number	Permissible Activity	Area		Commercial Component	Maximum Ground Coverage	Floor Area Ratio
		Minimum	Maximum			
1	Dhabas	1000 sq. metres	1 acre	50 Sqmt.	40%	40%
2	Restaurant	2000 sq. metres	1 acre	15%	30%	150%
3	Motel with banquet facilities	2.5 acres	5 acres	15%	30%	150%
4	Resort	4 acres	10 acres	15%	30%	150%
5	Amusement Park/Theme Park	2.5 acres	10 acres	15%	30%	50%

Provided the access permission is obtained from National Highway Authority of India if the site is located on National Highway, and from Executive Engineer, Public Works Department (Building and Roads) if the site is located on scheduled road.

(xxii) Banquet Hall:

Permissible Zone	Agriculture Zone
Approach	1. Minimum width of the approach road must be 18 meters 2. The access permission is required from XEN, PWD (B&R) if the site is located on scheduled road. 3. Approach from National Highways can be considered, if the site fulfills minimum distance norm from intersection/access and is located on minimum 7 meters wide service road or the applicant submits prior permission of access from NHAI
Area Required	Minimum area 2.5 acres Maximum area 5.00 acres
Floor Area Ratio	50%
Ground Coverage	30%
Conversion Charges	50% of the rates prescribed for Commercial use
Permissible Ancillary uses within Floor Area Ratio	10% of the allowed FAR for Gift Shop, STD Booth, Toy Centre and Flower Shops etc.
Parking	Minimum 25% of the site area.

Note: The provision of marriage palace/banquet hall within the municipal limit shall be as per the policy approved by the Department of Urban Local Bodies and as amended from time to time.

(xxiii) Microwave Towers/Stations, Seismic Centres and Telecommunication Centres

(xxiv) Communication Towers

(xxv) Ready Mix Concrete Plants, Wet mix plants, Hot Mix Plants connected with the projects for which contract or work is assigned by Government or Government agency and to be set up on short term basis.

(xxvi) Service Garage, Sale/Display Centre-cum-service garage as under:

Serial Number	Name of facility	Area (in acres)		Commercial component	Maximum ground coverage	Floor Area Ratio	Approach Road	Height
		Minimum	Maximum					
1	Service Garage	0.5	1	Nil	60%	1.25	Minimum 18 metres or service road along sector road	18 metres

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2	Sale/Display Centre-cum-service garage	0.5	2	10% of permissible Floor Area Ratio	60%	1.25	Minimum 18 metres or service road along sector road	18 metres

Note: * The fee and charges on commercial component shall be levied on the commercial rates;

* Existing/already CLU granted service garages shall be considered for grant of permission for sale/display centre subject to fulfillment of the above norms.

(xxvii) Weighing Bridge

(xxviii) Any other use, which Government may in Public Interest, decide

IX. Uses strictly prohibited:

Storages of petroleum and other inflammable material without proper license.

APPENDIX -1

Categories of Industries included in the scope / definition of Information Technology Industry

(A) Computing Devices including

Desktop
Personal Computer
Servers
Work-station
Nodes
Terminals
Network P.C.
Home P.C.
Lap-top Computers
Note Book Computers
Palm top Computer/PDA

(B) Network Controller Card/ Memories including

Network Interface Card (NIC)
Adaptor Ethernet /PCI/EISA/Combo/PCMICA
SIMMs Memory
DIMMs Memory
Central Processing Unit (CPU)
Controller SCSI/Array
Processors Processor/Processor Power Module/Upgrade

(C) Storage Units including

Hard Disk Drives/Hard Drives
RAID Devices and their Controllers
Floppy Disk Drives
C.D. ROM Drives
Tape Drives DLT Drives/DAT
Optical Disk Drives
Other Digital Storage Devices

(D) Other

Key Board
Monitor
Mouse
Multi-media Kits

(E) Printers and Output Devices including

Dot matrix
Laserjet
Inkjet
Deskjet

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LED Printers
Line Printers
Plotters
Pass-book Printers

(F) Networking products including
Hubs
Routers
Switches
Concentrators
Trans-receivers

(G) Software including
Application Software
Operating system
Middleware/Firmware

(H) Power supplies to Computer Systems including
Switch Mode Power Supplies
Uninterrupted Power supplies

(I) Networking/Cabling and related accessories
(related to IT Industry)
Fibre Cable
Copper Cable
Cables
Connectors, Terminal Blocks
Jack Panels, Patch Cord
Mounting Cord/Wiring Blocks
Surface Mount Boxes

(J) Consumables including
C.D.ROM /Compact Disk
Floppy Disk
Tapes DAT/DLT
Ribbons
Toners
Inkjet Cartridges
Inks for Output devices

(K) Electronic Components
Printed Circuit Board/Populated PCB
Printed Circuit Board/PCB
Transistors
Integrated Circuits/ICs
Diodes/Thyristor/LED
Resistors
Capacitors
Switches (On/Off, Push button, Rocker, etc.)
Plugs/sockets/relays
Magnetic heads, Print heads
Connectors
Microphones/Speakers
Fuses

(L) Telecommunication Equipment including:
Telephones
Videophones
Fascimile machines/Fax cards
Tele-Printers/Telex machine
PABX/EPABX/ RAX/MAX Telephone Exchange

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Multiplexers/Muxes
Modems
Telephone answering machines
Telecommunication Switching Apparatus
Anetna and Mast
Wireless datacom equipment
Receiving equipments like Pagers, mobile/Cellular Phones, etc.

VSATs

Video Conferencing Equipments

* Including Set Top Boxes for both Video and Digital Signaling.

(M) IT Enabled Services are business processes and services, the end products/services of which are:-

- Delivered outside India.
- Delivered over communication network., and
- Either externally contracted (out-sourced) or provided by a remote subsidiary of the same company (out-located).

Note: Services which would not be included are:-

- Remote production/manufacturing units
- The Corporate offices of companies or their local branches
- Virtual business on Internet.

The following services which meet the above criteria would be included:-

(i) Back-Office Operations
(ii) Call Centres
(iii) Content Development or Animation
(iv) Data Processing
(v) Engineering and Design
(vi) Geographic Information System Services
(vii) Human Resource Services
(viii) Insurance Claim Processing
(ix) Legal Database
(x) Medical Transcription
(xi) Payroll
(xii) Remote Maintenance
(xiii) Revenue Accounting
(xiv) Supports Centres and
(xv) Web-site Services.

S. N. ROY,
Additional Chief Secretary to Government Haryana,
Urban Local Bodies Department.

A. K. SINGH,
Principal Secretary to Government Haryana,
Town and Country Planning Department.

Annexure-VI(a)

FORM I

w.r.t.

INDUSTRIAL PLOTTED COLONY PROJECT

At

Village- Shidrawali, Tehsil- Manesar, District- Gurugram, Haryana

Project Proponent:

M/s Signatureglobal India Limited

Schedule: 8(b), Category: B1

Proposed Built-up Area = 6,36,042.498 m^2

Submission Period: December, 2024

QCI Certificate no. NABET/EIA/24-27/RA 0354

ENVIRONMENT CONSULTANT:

GRASS ROOTS RESEARCH & CREATION INDIA (P) LTD.

QCI Certificate no. NABET/EIA/2124/SA0211

(Accredited by QCI/NABET, Approved by MoEFCC, GoI, ISO 9001:2015 Certified Co.)

F-374-375, Sector-63, Noida, U.P.

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GRC INDIA TRAINING & ANALYTICAL LABORATORY

(Accredited by NABL, Recognized by MoEF&CC, GoI)

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FORM-I

(I) Basic Information

S. No.	Item	Details
1.	Name of the project/s	Industry Plotted Colony Project at Village- Shidrawali, Tehsil Manesar, District- Gurugram, Haryana by M/s Signatureglobal India Limited
2.	S. No. in the schedule	8 (b): Townships and Area Development projects
3.	Capacity/ area/ length/ tonnage to be handled/ command area/ lease area/ number of wells to be drilled	Total Plot Area = **5,49,258.716m² (135.7250 acres)** Built Up Area = **6,36,042.498m²**
4.	New/ Expansion/ Modernization	New
5.	Existing Capacity/ Area etc.	Not applicable
6.	Category of Project i.e. 'A' or 'B'	Category B1
7.	Does it attract the general condition? If yes, please specify.	No
8.	Does it attract the specific condition? If yes, please specify.	No
9.	Location Plot/Survey/ Khasra No. Village Tehsil District State	Latitude: 28° 14' 46.93' N Longitude: 76° 49' 29.40' E Village: Village- Shidrawali District: Gurugram State: Haryana
10.	Nearest railway station/airport along with distance in kms.	Nearest Railway Station: Inchhapuri RS (12.6 km, NW) Nearest Airport: Indira Gandhi International Airport (40 km, NE)
11.	Nearest Town, city, District Headquarters along with distance in kms.	Nearest Town: Shidrawali Town (approx. 8 km, S) Nearest city: Gurugram (approx. 13.5 km, N) District Headquarters: Gurugram (approx. 13.5 km, SE)
12.	Village Panchayats, Zilla Parishad, Municipal Corporation, Local body (complete postal addresses with telephone nos. to be given)	Gurugram Municipal Corporation, Address: C-1, Info City, Sector-34, Gurugram. Haryana Toll Free Number: 18001801817

13.	Name of applicant	**M/s Signatureglobal India Limited**
14.	Registered Address	13th Floor, Dr. Gopal Das Bhawan, 28 Barakhamba Road, New Delhi- 110001
15.	Address for correspondence :	
	Name	Vineet Kumar
	Designation (Owner/Partner/CEO)	Authorised Signatory
	Address	13th Floor, Dr. Gopal Das Bhawan, 28 Barakhamba Road, New Delhi- 110001
	Pin Code	110001
	Telephone No.	9910670404
	Fax No.	--
	E-mail	vineet.kumar@signatureglobal.in
16.	Details of Alternative Sites examined, if any. Location of these sites should be shown on a toposheet.	No
17.	Interlinked Projects	No
18.	Whether separate application of interlinked project has been submitted?	No
19.	If yes, date of submission	Not Applicable
20.	If no, reason	Not Applicable
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?	 No No No
22.	Whether there is any Government Order/Policy relevant/relating to the site?	1. NBC Guidelines, 2016 2. State Bye Laws 3. MoEFCC Guidelines
23.	Forest land involved (hectares)	No Forest Land involved.
24.	Whether there is any litigation	No

	pending against the project and /or land in which the project is propose to be set up? (a) Name of the Court (b) Case No. (c) Orders/directions of the Court, if any and its relevance with the project.	

(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 License has been granted by Directorate of Town and Country Planning, Haryana vide License no. 104 of 2024 dated: - 01.08.2024
1.2	Clearance of existing land, vegetation and buildings?	**Yes**	There are few trees present at the project site which will be transplanted in the greenbelt.
1.3	Creation of new land uses?	**Yes**	The License has been granted by Directorate of Town and Country Planning, Haryana vide License no. 104 of 2024 dated: - 01.08.2024
1.4	Pre-construction investigations e.g. bore houses, soil testing?	**Yes**	Soil investigation has been done during the study.
1.5	Construction works?	**Yes**	All construction activities will be confined within the project premises; there will be no physical changes outside the project boundary.
1.6	Demolition works?	**No**	Not applicable
1.7	Temporary sites used for construction works or housing of construction workers?	**No**	All the construction activity including stocking of raw materials will be confined within the project site only.

			No temporary labor hutments are proposed. Local labors from nearby area will be hired. Sanitation facilities will be developed at site.
1.8	Above ground buildings, structures or earthworks including linear structures, cut and fill or excavations	**Yes**	The earthwork included soil excavation and cutting of the earth will be moved. Excavated earth will be reused and excess will be handed over to authorized vendor.
1.9	Underground works including mining or tunneling?	**No**	No underground works including mining/ tunneling will be undertaken except excavation of earth.
1.10	Reclamation works?	**No**	No reclamation work required.
1.11	Dredging?	**No**	No dredging required.
1.12	Offshore structures?	**No**	No offshore structures required.
1.13	Production and manufacturing processes?	**No**	No production/manufacturing process involved as the project involves development of residential apartment.
1.14	Facilities for storage of goods or materials?	**Yes**	Raw material will be stored at site in a covered area. Cement will be separately stored under cover in bales. Sand will be stacked neatly under tarpaulin cover. Bricks and steel will be laid in open.
1.15	Facilities for treatment or disposal of solid waste or liquid effluents?	**Yes**	**Solid Waste:** The solid waste generated from the project will be in the form of: **Construction Waste:** Left over cement and mortars, cement concrete blocks, aggregate, sand and other inorganic material will be recycled and reused as granular subbase (GSB) layer of pavement. Earth rendered surplus from the excavation will be utilized in the embankment works. **Operational Phase:**

			The solid waste generated from the project shall be approx. 18143 kg per day @ 0.5 kg per capita per day for residents, @ 0.15 kg per capita per day for the visitor, @ 0.3 kg per capita per day for the staff members and landscape waste @ 0.2 kg/acre/day) and STP sludge waste @0.35 * Wastewater generated*BOD difference/1000). Solid wastes generated will be segregated into biodegradable (waste vegetables and foods etc.) and non-biodegradable (papers, cartons, thermocol, plastics, glass, etc.) components and collected in separate bins. The biodegradable organic wastes will be disposed by local vendors. Recyclable and non-recyclable wastes will be disposed through Govt. approved agency. **Liquid Effluents:** **Construction Phase:** During construction phase, sewage will be treated and disposed through septic tanks with soak pits. **Operational Phase:** The wastewater in operation phase will be treated in 3 onsite STPs of total 3060 KLD capacity (500 KLD +1410 KLD +1150 KLD) and treated effluent will be reused for flushing, & horticulture and the remaining water will be discharge to External Sewer.
1.16	Facilities for long term housing of operational workers?	**No**	Local laborers will be hired from nearby areas during construction phase. So, there will be no facilities for long-term housing of operational

			workers.
1.17	New road, rail or sea traffic during construction or operation?	**No**	Only internal roads; paths will be developed for vehicular movements for transportation of construction material during construction phase whereas internal tracks and paths will be developed for traffic circulation (to avoid any congestion) during operational phase.
1.18	New road, rail, air waterborne or other transport infrastructure including new or altered routes and stations, ports, airports etc?	**No**	Only internal roads; paths will be developed for vehicular movements for transportation of construction material during construction phase whereas internal tracks and paths will be developed for traffic circulation (to avoid any congestion) during operational phase.
1.19	Closure or diversion of existing transport routes or infrastructure leading to changes in traffic movements?	**Yes**	There will be part closure at portions of the carriageway or in median during construction. Post construction there would be minor modifications in the traffic circulation in the area for seamless traffic movement, both vehicular and pedestrian.
1.20	New or diverted transmission lines or pipelines?	**No**	There are not been any new/diverted transmission lines or pipelines around the project.
1.21	Impoundment, damming, culverting, realignment or other changes to the hydrology of watercourses or aquifers?	**No**	No impoundment, damming, culverting, realignment or other changes to the hydrology of surface watercourses.
1.22	Stream crossings?	**No**	There are no streams running across the site.
1.23	Abstraction or transfers of water form ground or surface waters?	**Yes**	The water supply will be through Ground water during construction phase. About 1943 KLD of fresh water will be required during operation phase of the project.

1.24	Changes in water bodies or the land surface affecting drainage or run-off?	**Yes**	Runoff will increase due to increased paved surface. However, increased runoff will be managed by well-designed rainwater harvesting system and storm water management plan.
1.25	Transport of personnel or materials for construction, operation or decommissioning?	**Yes**	During the construction phase, most of the transportation of construction material will be done at nighttime. Adequate parking space within the project site for loading and unloading of materials will be provided. Adequate parking space will be provided for operational phase in the premises.
1.26	Long-term dismantling or decommissioning or restoration works?	**No**	No Long term dismantling or decommissioning or restoration works will be involved.
1.27	Ongoing activity during decommissioning which could have an impact on the environment?	**No**	None
1.28	Influx of people to an area in either temporarily or permanently?	**No**	Local laborers from nearby area will be employed during the construction phase. In the operation phase, most of the occupants will be from the surrounding areas. Hence, the project led to a redistribution of occupants within the city. Thus, there will be no significant influx of people is envisaged.
1.29	Introduction of alien species?	**No**	Not Applicable.
1.30	Loss of native species or genetic diversity?	**No**	There will be no significant impact on the native species or genetic diversity.
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 License has been granted by Directorate of Town and Country Planning, Haryana vide License no. 104 of 2024 dated: - 01.08.2024
2.2	Water (expected source & competing users) unit: KLD	**Yes**	During operation phase, total water requirement is 3221 KLD. About 1943 KLD of fresh water will be required for the project and will be sourced through GMDA.
2.3	Minerals (MT)	**Yes**	Minerals such as sand, Cement and aggregates will be required during the construction phase.
2.4	Construction material – stone, aggregates, sand/ soil (expected source – MT)	**Yes**	All materials for construction will be arranged through selected authorized suppliers.
2.5	Forests and timber (source – MT)	**No**	All material and timber will be provided by selected suppliers. However steel frames etc. shall be used to minimize the use of timber.
2.6	Energy including electricity and fuels (source, competing users) Unit: fuel (MT), energy (MW)	**Yes**	The power supply will be supplied by Dakshin Haryana Bijli Vitran Nigam (DHBVN). The total maximum demand is estimated as 12,883 kW. There is provision of 2no. of DG set of total capacity 1100kVA for Commercial Facility which includes 1 x 750kVA +1x 350 kVA and 2no. of DG set of total capacity 1750 kVA for Common Services which includes 1 x 750kVA +1x 1000 kVA are proposed for power back up. The DG sets will be equipped with acoustic enclosure to minimize noise generation and adequate stack height for proper dispersion.
2.7	Any other natural resources (use appropriate standard units)	**No**	Not Applicable

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**	Not Applicable
3.2	Changes in occurrence of disease or affect disease vectors (e.g. insect or water borne diseases)	**No**	Suitable drainage and waste management measures will be adopted in both the construction and operational phase such that there will be no stagnation of water or accumulation of waste. This will effectively restrict the reproduction and growth of disease vectors.
3.3	Affect the welfare of people e.g. by changing living conditions?	**Yes**	Socio-economic standard of people will improve due to increased direct and secondary employment opportunities provided by this project. This will lead to better quality of life and will also set a standard for future developments in the area.
3.4	Vulnerable groups of people who could be affected by the project e.g. hospital patients, children, the elderly etc.	**No**	Impacts of this type are not expected.
3.5	Any other causes	**No**	Not Applicable

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

S. No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
4.1	Spoil, overburden or mine wastes	**No**	No such spoil, overburden or mine

			wastes will be generated
4.2	Municipal waste (domestic and or commercial wastes)	**Yes**	The total solid waste to be generated is approx. 18143 kg/day. Arrangements will be made at the site in accordance to Municipal Solid Waste (Management and Handling) Rules, 2000 and amended Rules, 2016.
4.3	Hazardous wastes (as per Hazardous Waste Management Rules)	**Yes**	The hazardous wastes along with other wastes in the project will be used oil from DG sets, which is classified as per The Hazardous Wastes (Management & Handling) Rules, 2016 (As amended). Used oil from DG sets will be stored in HDPE drums in isolated covered facility. This used oil will be sold to authorized recyclers. Suitable care will be taken so that spills/leaks of used oil from storage are avoided.
4.4	Other industrial process wastes	**No**	Not applicable
4.5	Surplus product	**No**	Not applicable
4.6	Sewage sludge or other sludge from effluent treatment	**Yes**	343.434 kg/day of Sludge generated from the STP plant will be dried and later will be used as manure for green belt development.
4.7	Construction or demolition wastes	**Yes**	The construction waste will consist of excess earth and construction debris along with cement bags, steel in bits and pieces, insulating and packaging materials etc. Recyclable waste construction materials will be sold to recyclers. Unusable and excess construction debris will be disposed at designated places in tune with the local norms.
4.8	Redundant machinery or equipment	**No**	Redundant machinery will not be generated.
4.9	Contaminated soils or other materials	**No**	Contaminated soils or other materials

			will be not being generated.
4.10	Agricultural wastes	**Yes**	Landscape wastes of 5.2 kg/day will be generated.
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**	The project does not envisage any major air pollution sources except operation of DG sets during power failure and vehicular traffic.
5.2	Emissions from production processes	**No**	No production processes involved. Hence, there will be no such emissions.
5.3	Emissions from materials handling including storage or transport	**Yes**	Small quantities of fugitive emissions will be envisaged during transport and handling of materials. Such emissions will be temporary and controlled by the use of sprinkling and other viable techniques.
5.4	Emissions from construction activities including plant and equipment	**Yes**	This will be restricted to the construction phase and the construction site only.
5.5	Dust or odours from handling of materials including construction materials, sewage and waste	**Yes**	Dust will be anticipated during loading and unloading of construction material and excavation of upper earth surface. This is temporary in nature, which will be controlled by providing water sprinklers. Tarpaulin cover will be provided on stored loose materials to reduce the dust emission.
5.6	Emissions from incineration of waste	**No**	No incineration of wastes is proposed.
5.7	Emissions from burning of waste in open air (e.g. slash materials, construction debris)	**No**	Open burning of biomass/other material will be prohibited on site.
5.8	Emissions from any other sources	**No**	Not Applicable

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

			Details thereof (with approximate quantities/

S. No.	Information/Checklist confirmation	Yes/ No	rates, wherever possible) with source of information data
6.1	From operation of equipment e.g. engines, ventilation plant, crushers	**Yes**	**Construction phase:** Noise will be generated by machinery used for construction, viz. cranes, excavators, dumpers, earth compactor, concrete mixer, bar cutting machine. Operation Phase: Source of noise in the operational phase will be from backup DG set and pumps & motors. All the machinery will be of highest standard of reputed make and will comply with standard i.e. the DG set room will be provided with acoustic enclosure to have minimum 25 dB(A) insertion loss or for meeting the ambient noise standard whichever is on higher side as per E (P) Act, GSR 371 (E) and its amendments. High noise generating construction activities would be carried out only during day time.
6.2	From industrial or similar processes	**No**	Not Applicable.
6.3	From construction or demolition	**Yes**	Due to various construction activities, there will be short-term noise impacts in the immediate vicinity of the project site. The construction activities included the following noise generating activities: • Concreting, mixing & operation of DG sets. • Construction plant and heavy vehicle movement.
6.4	From blasting or piling	**No**	No blasting or mechanized piling will be done.
6.5	From construction or operational traffic	**Yes**	Some noise will be generated from vehicular movement in the construction and operational phase but that will be mitigated with green belt.
6.6	From lighting or cooling systems	**No**	No significant noise impact will result from lighting or 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:

			Details thereof (with approximate

S. No.	Information/Checklist confirmation	Yes/ No	quantities/rates, wherever possible) with source of information data
7.1	From handling, storage, use or spillage of hazardous materials	**No**	The project does not involve handling of hazardous material which will contaminate ground water Spent oil from DG sets will be stored in HDPE drums and disposed as per Hazardous waste Management Rules, 2016.
7.2	From discharge of sewage or other effluents to water or the land (expected mode and place of Discharge)	**No**	The wastewater will be treated in an onsite in 3 onsite STPs of total 3060 KLD capacity (500 KLD +1410 KLD +1150 KLD) and treated effluent will be reused for flushing, & horticulture and the remaining water will be discharge to External Sewer.
7.3	By deposition of pollutants emitted to air into the land or into water	**No**	The project does not envisage any major sources during operation phase.
7.4	From any other sources	**No**	Not Applicable
7.5	Is there a risk of long term buildup of pollutants in the environment from these sources?	**No**	Not Applicable

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**	To deal with any fire related accident, firefighting facility of single handed hydrant valve, long hose reel, and portable fire extinguisher shall be provided.
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.)s	**Yes**	The project falls under seismic active Zone IV indicating high damage risk zone. The buildings will be designed as earthquake resistant and comply with the required IS specifications.

9. Factors which should be considered (such as consequential development) which could 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 development stimulated by the project which could have impact on the environment e.g.: • Supporting infrastructure (roads, power supply, waste or sullage treatment, etc.)	**Yes**	Appropriate infrastructure like roads, power supply, waste management and wastewater treatment will be developed within the project site.
	• Housing development	**Yes**	Industrial Plotted Colony Project
	• Extractive industries	**No**	
	• Supply industries	**No**	
	• Other	**No**	
9.2	Lead to after-use of the site, which could have an impact on the environment	**No**	Not Anticipated
9.3	Set a precedent for later developments	**Yes**	The project will provide good infrastructure and better lifestyle and will set an example for later developments in the areas.
9.4	Have cumulative effects due to proximity to other existing or planned projects with similar effects	**No**	Not Applicable

(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.	Indori Nala	Approx. 1.8 km, SE
		Rangala RF	Approx. 3.8 km, SE
		Gondhan PF	Approx. 6.8 km, N
		Sahibi River	

		Chaupanki RF Khori Kalan PF	Approx. 8.6 km, S Approx. 12 km, SE Approx. 13.3 km, ENE
2	Areas which are important or sensitive for ecological reasons - Wetlands, watercourses or other water bodies, coastal zone, biospheres, mountains, forests	Indori Nala Rangala RF Gondhan PF Sahibi River Chaupanki RF Khori Kalan PF	Approx. 1.8 km, SE Approx. 3.8 km, SE Approx. 6.8 km, N Approx. 8.6 km, S Approx. 12 km, SE Approx. 13.3 km, ENE
3	Areas used by protected, important or sensitive species of flora or fauna for breeding, nesting, foraging, resting, over wintering, migration	Indori Nala Rangala RF Gondhan PF Sahibi River Chaupanki RF Khori Kalan PF	Approx. 1.8 km, SE Approx. 3.8 km, SE Approx. 6.8 km, N Approx. 8.6 km, S Approx. 12 km, SE Approx. 13.3 km, ENE
4	Inland, coastal, marine or underground waters	None	---
5	State, National boundaries	None	---
6	Routes or facilities used by the public for access to recreation or other tourist, pilgrim areas	NH 48 SH 28 NH 919	Adjacent to project (NW) Approx. 0.58 km; (SW) Approx. 3.8 km; (S)

		SH 25 MDR 132 Western Peripheral Expy. NH 352W	Approx. 4.1 km; (S) Approx. 5.1 km; (NE) Approx. 8.7 km; (NE) Approx. 9.5 km; (NW)
7	Defense installations	None	--
8	Densely populated or built-up area	Gurugram	13.5 km N away from the project site
9	Areas occupied by sensitive man-made land uses *(hospitals, schools, places of worship, community facilities)*	**Schools:** Rajendra Public School, Gurugram Virat International School, Kapriwas **College:** Government College, Shidhrawali Rao Lal Singh College of Education **Hospital:** Vardaan Hospital, Dharuhera Gangaram Hospital And Trauma Centre **Temple:** Panchmukhi Hanuman Mandir	Approx. 0.15 km towards NW Approx. 1 km towards W Approx. 1.2 km towards N Approx. 2 km towards N Approx. 5 km towards SW Approx.5.8 km towards NE Approx. 3.9 km towards S
10	Areas containing important, high quality or scarce resources. *(ground water resources, surface resources, forestry, agriculture,*	None	

	fisheries, tourism, minerals)		
11	Areas already subjected to pollution or environmental damage *(those where existing legal environmental standards are exceeded)*	None	There are no areas within 15 km which are subjected to pollution or environmental damage.
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*)	Earthquakes	The site falls under the zone IV as per the Seismic Zone Map of India and is thus prone to highest damage risk zone. Adequate measures will be taken during the construction of the project.

8(b):STANDARD TERMS OF REFERENCE FOR CONDUCTING ENVIRONMENT IMPACT ASSESSMENT STUDY FOR TOWNSHIP/ AREA DEVELOPMENT PROJECTS AND INFORMATION TO BE INCLUDED IN EIA/EMP REPORT

1. Examine details of land use as per Master Plan and land use around 10 km radius of the project site. Analysis should be made based on latest satellite imagery for land use with raw images. Check on flood plain of any river.
2. Submit details of environmentally sensitive places, land acquisition status, rehabilitation of communities/ villages and present status of such activities.
3. Examine baseline environmental quality along with projected incremental load due to the project **(Already generated for Winter season – December 2023 to February 2024).**
4. Environmental data to be considered in relation to the project development would be (a) land, (b) groundwater, (c) surface water, (d) air, (e) bio-diversity, (f) noise and vibrations, (g) socio economic and health.
5. Submit a copy of the contour plan with slopes, drainage pattern of the site and surrounding area. Any obstruction of the same by the project
6. Submit the details of the trees to be felled for the project.
7. Submit the present land use and permission required for any conversion such as forest, agriculture etc.

8. Submit Roles and responsibility of the developer etc for compliance of environmental regulations under the provisions of EP Act.
9. Ground water classification as per the Central Ground Water Authority.
10. Examine the details of Source of water, water requirement, use of treated waste water and prepare a water balance chart.
11. Rain water harvesting proposals should be made with due safeguards for ground water quality. Maximize recycling of water and utilization of rain water. Examine details.
12. Examine soil characteristics and depth of ground water table for rainwater harvesting.
13. Examine details of solid waste generation treatment and its disposal.
14. Examine and submit details of use of solar energy and alternative source of energy to reduce the fossil energy consumption. Energy conservation and energy efficiency.
15. DG sets are likely to be used during construction and operational phase of the project. Emissions from DG sets must be taken into consideration while estimating the impacts on air environment. Examine and submit details.
16. Examine road/rail connectivity to the project site and impact on the traffic due to the proposed project. Present and future traffic and transport facilities for the region should be analysed with measures for preventing traffic congestion and providing faster trouble free system to reach different destinations in the city.
17. A detailed traffic and transportation study should be made for existing and projected passenger and cargo traffic.
18. Examine the details of transport of materials for construction which should include source and availability.
19. Examine separately the details for construction and operation phases both for Environmental Management Plan and Environmental Monitoring Plan with cost and parameters.
20. Submit details of a comprehensive Disaster Management Plan including emergency evacuation during natural and man-made disaster.
21. Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the Project should be given.

22. The cost of the Project (capital cost and recurring cost) as well as the cost towards implementation of EMP should be clearly spelt out.
23. Any further clarification on carrying out the above studies including anticipated impacts due to the project and mitigative measure, project proponent can refer to the model ToR available on Ministry website http://moef.nic.in/Manual/Townships.

"I hereby undertaking that the data and information given in the application and enclosures 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 our risk and cost.

Date:

Place:

Signature of the Applicant

With Name and Full Address

(Project Proponent/ Authorized Signatory)

NOTE:

1. The Projects involving clearance under Coastal Regulation Zone Notification, 1991 shall submit with the application a C.R.Z map duly demarcated by one of the authorized agencies, showing the project activities, w.r.t. C.R.Z. and the recommendations of the state Coastal Zone management Authority. Simultaneous action shall also be taken to obtain the requisite clearance under the provisions of the C.R.Z. Notification, 1991 for the activities to be located in the CRZ.
2. The projects to be located within 10 km of the National Parks, Sanctuaries, Biosphere Reserves, Migratory Corridors of Wild Animals, the project proponent shall submit the map duly authenticated by Chief Wildlife Warden showing these features vis-à-vis the project location and the recommendations or comments of the Chief Wildlife Warden thereon."
3. All correspondence with the Ministry of Environment & Forests including submission of application for TOR/ Environmental Clearance, subsequent clarifications, as may be required from time to time, participation in the EAC Meeting on behalf of the project proponent shall be made by the authorized signatory only. The authorized signatory should also submit a document in support of his claim of being an authorized signatory for the specific project".

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FORM IA

w.r.t.

INDUSTRIAL PLOTTED COLONY PROJECT

At

Village- Shidrawali, Tehsil Manesar, District- Gurugram, Haryana

Project Proponent:

M/s Signatureglobal India Limited

Schedule: 8(b), Category: B1

Proposed Built-up Area = 6,36,042.498 m²

Submission Period: December, 2024

QCI Certificate no. NABET/EIA/24-27/RA 0354

ENVIRONMENT CONSULTANT:

GRASS ROOTS RESEARCH & CREATION INDIA (P) LTD.

QCI Certificate no. NABET/EIA/2124/SA0211

(Accredited by QCI/NABET, Approved by MoEFCC, GoI, ISO 9001:2015 Certified Co.)

F-374-375, Sector-63, Noida, U.P.

Ph.: 0120- 4044630, Telefax: 0120- 2406519

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Website: http://www.grc-india.com

GRC INDIA TRAINING & ANALYTICAL LABORATORY

(Accredited by NABL, Recognized by MoEF&CC, GoI)

A unit of GRC India

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FORM IA

CHECK LIST OF ENVIRONMENTAL IMPACTS

SECTION 1- LAND ENVIRONMENT

1.1 Will the existing land use get significantly altered from the project that is consistent with the surroundings? (Proposed land use must conform to the approved Master Plan/Development Plan of the area. Change of land use, if any and the statutory approval from the competent authority are submitted). Attach Maps of (i) site location, (ii) surrounding features of the proposed site (within 500 meters) and (iii) the site (indicating levels & contours) to appropriate scales. If not available attach only conceptual plans.

➢ **No**

The Industrial Plotted Colony Project is to be developed by M/s Signatureglobal India Limited. The project site is located at Village- Shidrawali, tehsil Manesar, District-Gurugram, Haryana on a land measuring 135.7250 acres.

The company has vast experience in planning and construction of Industrial Parks. The project facilities include:

- Industrial Plotted Development
- Residential Plotted Development
- Community facilities
- Commercial facilities



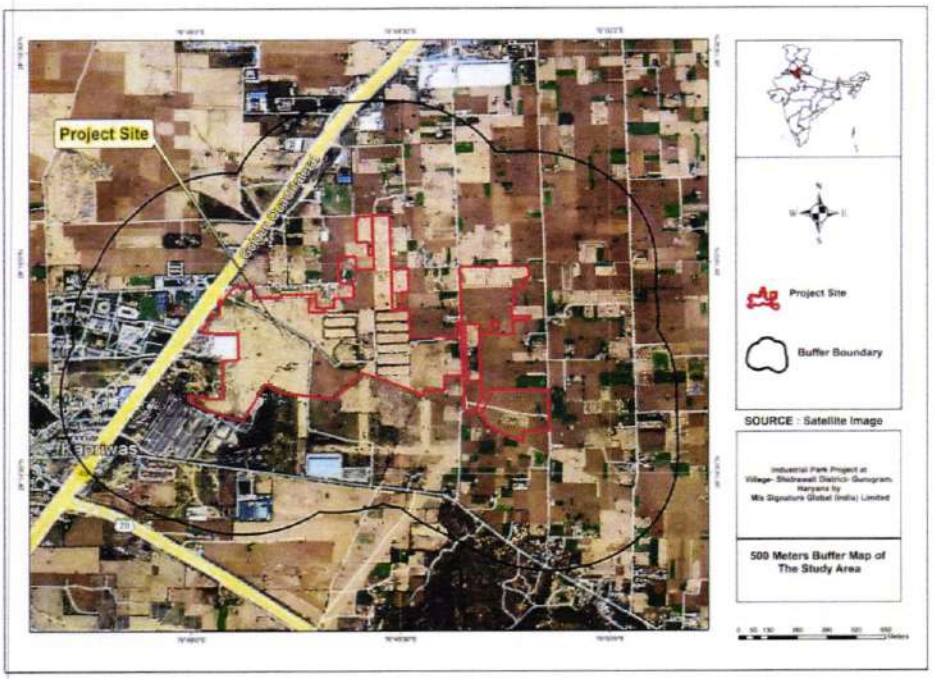


Fig.1: Location of the Project Site on 500 m Buffer Map

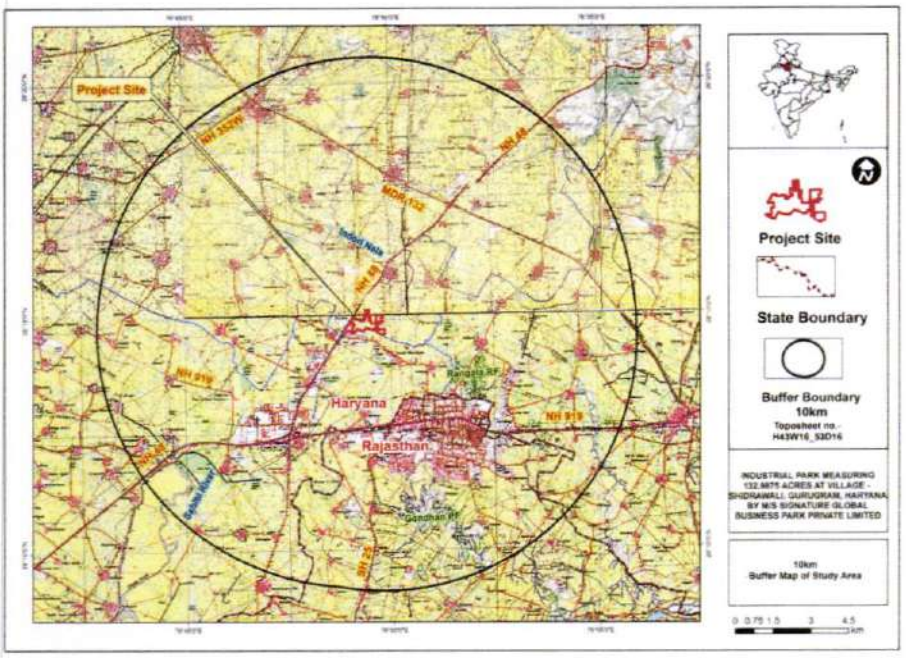


Fig. 2: SOI Toposheet Showing 10 km radius around Project site

1.2 List out all the major project requirements in terms of the land area, built up area, water consumption, power requirement, connectivity, community facilities, parking needs etc.

LAND REQUIREMENT:

The total area of the site is **5, 49,258.716** m^2 (135.7250 acre). The detailed area statement along with brief details of the project is provided below in **Table 1:**

Table 1: Detailed Area Statement

S. No.	Particulars	Area (in m^2)
1.	**Total Licensed area**	**5,49,258.716**
2	Area under Road (Delhi –Jaipur Road) Widening	10,194.015
3	Area under proposed Green Belt of Delhi –Jaipur Road (considering 60 m wide on either side)	13677.139
4	Area under green belts of RRTS (considering 20m on either side)	5293.280
5.	Total area to be deducted (2+3+4)	29,164.434
6.	**Balance area (1-5)**	**5,20,094.282**
7.	**50% benefit of area under road** (Delhi –Jaipur Road) Widening, Green Belt of Delhi –Jaipur Road & green belts of RRTS	**11,935.577**
8.	**Net Area (6+7)**	**5,32,029.859**
9.	Area under undetermined use	5,516.641
10.	**Net Planned area (8-9)**	**5,26,513.219**
11.	**Proposed Area under plots**	**319,416.066**
	• Area under Industrial Plots	1,84,280.882
	• Area under Residential plots	1,27,433.845
	• Area under Commercial plots	7701.339
12.	**Total Permissible FAR**	**5,78,220.453**
	• Industrial Permissible FAR (1.250)	2,30,351.102
	• Commercial Permissible FAR (4.2857/Plot)	11,417

	• Residential Permissible FAR (2.64)	3,36,452.351
13.	**Total Proposed FAR**	**5,78,220.453**
	• Industrial FAR	2,30,351.102
	• Commercial FAR	11,417
	• Residential FAR	3,36,452.351
14.	NON-FAR Area	**57,822.045**
15.	**Total Built up area**	**6,36,042.498**
16.	**Green Area**	**1,05,302.64**

➢ **WATER REQUIREMENT**

During the Construction Phase the Source of water will be Ground water. During operation phase, the source of water supply will be GMDA. The total water requirement for the project will be approx. 3,221 KLD.

The domestic water demand for Residential (Type 1 & 2), Community Buildings, Commercial Buildings, & industrial Plots is 2905 KLD. The freshwater requirement for Residential (Type1 &2), Community Buildings, Commercial Buildings, & industrial Plots will be 1943 KLD. However, one-time freshwater demand for the project will be 3,221 KLD.

➢ **POWER REQUIREMENT**

The power shall be supplied by the State Electricity Board. The maximum load demand for the project will be approx. 12,883 kW.

Details of D.G Sets: There is provision of 2no. of DG set of total capacity 1100kVA for Commercial Facility which includes 1 x 750kVA +1x 350 kVA and 2no. of DG set of total capacity 1750 kVA for Common Services which includes 1 x 750kVA +1x 1000 kVA are proposed for power back up. The DG sets will be equipped with acoustic enclosure to minimize noise generation and adequate stack height for proper dispersion.

➢ **CONNECTIVITY**

The Nearest Highway is NH-48 which is adjacent to the 8.7 km site in North west direction, SH-28 is 0.58 km towards SW direction, SH-25 which is 4.1 km (S), NH-919 is 3.8 km towards S direction, Western Peripheral Expressway is 8.7 km towards NE direction, MDR

132 is 5.1km towards NE direction, & NH-352W which is 9.8 km (S) direction away from project site.
The nearest railway station being Inchhapuri Railway Station is about 12.6 km (NW) away from the project site.
The nearest Airport is Indira Gandhi International Airport 40 km (NE) from the project site.

- **PARKING FACILITIES**

Adequate provision will be made for car/vehicle parking at the project site. There shall also be adequate parking provisions for visitors so as not to disturb the traffic and allow smooth movement at the site.

For plotted development the parking shall be within the plots by the individual plot owners.

1.3 What are the likely impacts of the proposed activity on the existing facilities adjacent to the proposed site? (Such as open spaces, community facilities, details of the existing land use and disturbance to the local ecology).

The project being a well-planned activity will result in organized open spaces and green areas. Total green area measures 1,05,302.64 m^2 (Shelter belt, Avenue plantation and lawn). The biodiversity in the area will increase due to the proposed green areas. The project will have an overall positive impact on the existing land use and will not cause any disturbance to the local ecology. Proposed activity shall have no impact on surroundings.

1.4 Will there be any significant land disturbance resulting in erosion, subsidence & instability? (Detail of soil type slope analysis, vulnerability to subsidence, seismicity, etc. may be given).

There will be no land disturbance resulting in erosion, subsidence and instability as it is a vacant land. The site falls under the zone IV as per the seismic zone map of India and indicating highest damage risk zone. The project will be earthquake resistant taking into account the latest provisions of Indian Standards Codes.

1.5 Will the proposal involve alteration of natural drainage system? (Give details on a contour map showing the natural drainage near the project site).

The project will not intersect any natural drainage route. Urbanized stretch and well planned storm water drainage will be designed for internal storm water drainage. Thus, no impact on the natural drainage system is anticipated.

1.6 What are the quantities of earthwork involved in the construction activity- cutting, filling, reclamation etc. (Give details of the quantities of earthwork involved, transport of fill materials from outside the site, etc.?)

The earthwork included soil excavation and cutting of the earth will be moved. The cut and fill material in the project site is nearly at par and hence the need for movement of soil to and from the site will not be anticipated.

1.7 Give details regarding water supply, waste handling etc. during the construction period.

During the Construction Phase the Source of water will be Ground water. During operation phase, the source of water supply will be GMDA. The total water requirement for the project will be approx. 3,221 KLD.

The domestic water demand for Residential (Type 1 & 2), Community Buildings, Commercial Buildings, & industrial Plots is 2905 KLD. The freshwater requirement for Residential (Type1 &2), Community Buildings, Commercial Buildings, & industrial Plots will be 1943 KLD. However, one-time freshwater demand for the project will be 3,221 KLD. Waste handling during the construction phase will be done by the site contractor whose responsibility lies with collection and storage of construction and demolition waste generated on the site. All construction wastes generated during construction will be used within the site itself for filling the floors, roads, aggregate for mortar etc. to the extent feasible. Remaining will be sent to the agency for proper disposal.

SECTION 2- WATER ENVIRONMENT

2.1 Give the total quantity of water requirement for the project with the breakup of requirements for various uses. How will the water requirement be met? State the sources & quantities and furnish a water balance statement.

During the Construction Phase the Source of water will be Ground water. During operation phase, the source of water supply will be GMDA. The total water requirement for the project will be approx. 3,221 KLD.

The domestic water demand for Residential (Type 1 & 2), Community Buildings, Commercial Buildings, & industrial Plots is 2905 KLD. The freshwater requirement for Residential (Type1 &2), Community Buildings, Commercial Buildings, & industrial Plots will be 1943 KLD. However, one-time freshwater demand for the project will be 3,221 KLD.

The calculation of daily water requirement and wastewater is given below in Table 2 to 6 respectively.

Table 2: Calculations for Daily Water Demand

S. No.	Description	Occupancy	Rate of water demand (lpcd)		Total Water Requirement (KLD)		
			Fresh	Flushing	Fresh	Flushing	Total
A.	**Domestic Water for Residential plots (Type 1)**						
	Residential plots	5130	@ 65 lpcd	@ 21 lpcd	333	108	441
	• Staff	200	@25 lpcd	@20 lpcd	5	4	9
	• Visitors	513	@ 10 lpcd	@5 lpcd	5	3	8
					343 KLD	**115 KLD**	**458 KLD**
	Total Domestic Water= 458 KLD						
B.	**Domestic Water for Residential plots (Type 2), Community buildings, & Commercial buildings**						

	Residential plots (Type 2)	12186	@ 65 lpcd	@ 21 lpcd	792	256	1048
	• Staff (for Community buildings, Operation & Maintenanc e for residential plots (type 2) & Commercial building)	1870	@25 lpcd	@20 lpcd	47	37	84
	• Visitors (for Community buildings, Residential Plots, & Commercial building)	16,244	@ 10 lpcd	@5 lpcd	162	81	243
					1001 KLD	**374 KLD**	**1375 KLD**
Total Domestic Water for Residential plots (Type 2), Community buildings & Commercial Buildings = 1375 KLD							
C.	**Domestic Water for Industrial plots**						
	• Industrial Plots	23,035	@25 lpcd	@20 lpcd	576	461	1037
	• Visitors (for Industrial plots)	2303	@ 10 lpcd	@5 lpcd	23	12	35

					599 KLD	**473 KLD**	**1072 KLD**
	Total Domestic Water for Industrial plots						**1072 KLD**
D.	**Horticulture**	1,05,302.64 m^2	3 l/sqm		316 KLD		
Grand Total (A+B +C+D) 3,221 KLD							

Table 4: Wastewater Calculation for Residential plots (Type 1)

Domestic Water	**458 KLD**
• Fresh water	343 KLD
• Flushing water	115 KLD
Waste water [@80% fresh + 100% flushing]	274.4 +115 = **389 KLD**
STP Capacity	500 KLD

Table 5: Wastewater Calculation for Residential plots (Type 2), Community buildings, & Commercial buildings,

Domestic Water	**1375 KLD**
• Fresh water	1001 KLD
• Flushing water	374 KLD
Waste water [@80% fresh + 100% flushing]	801 + 374= **1175 KLD**
STP Capacity	1410 KLD

Table 6: Wastewater Calculation for Industrial plots

Domestic Water	**1072 KLD**
• Fresh water	599 KLD
• Flushing water	473 KLD
Waste water [@80% fresh + 100% flushing]	479 + 473= **952 KLD**
STP Capacity	1150 KLD

WASTE WATER & TREATEMENT

Approx. 2516 KLD wastewater will be generated from the **Residential plots (Type 1 & 2), Community buildings, Commercial buildings & Industrial plots**. Wastewater will be treated in an in-house STP of total capacity 3060 KLD (500 KLD +1410 KLD +1150 KLD).

STP 1 [For Residential plots (Type 1)]: 500KLD

STP 2 [For Residential plots (Type 2), Community buildings, & Commercial buildings]: 1410 KLD

STP 3 [For Industrial plot]:1150 KLD

Treated wastewater will be used for flushing and horticulture and remaining water will discharge to External sewer.

Water balance diagram for summer, monsoon & winter season is presented below:

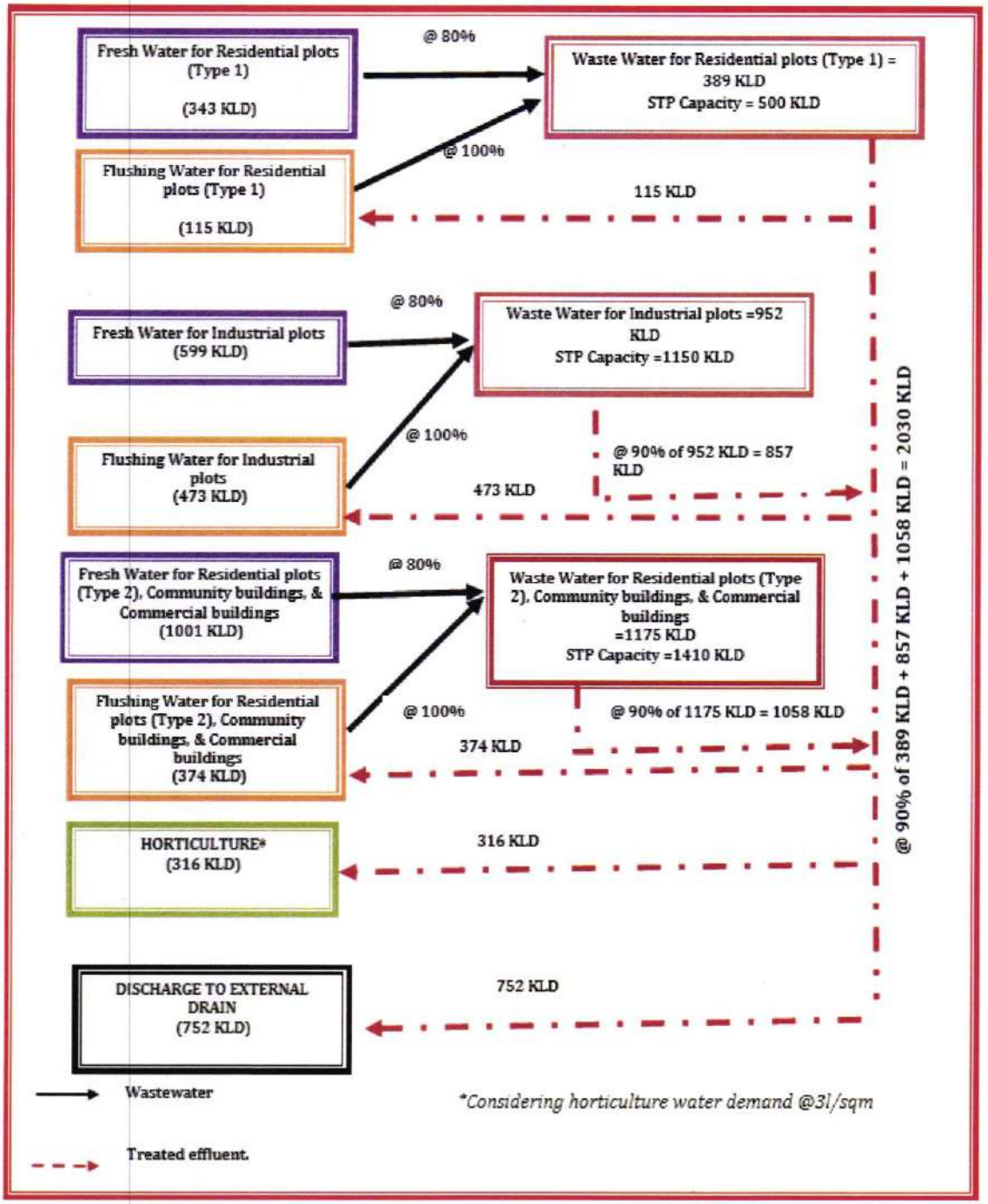


Figure 4: Water Balance Diagram (Summer Season)

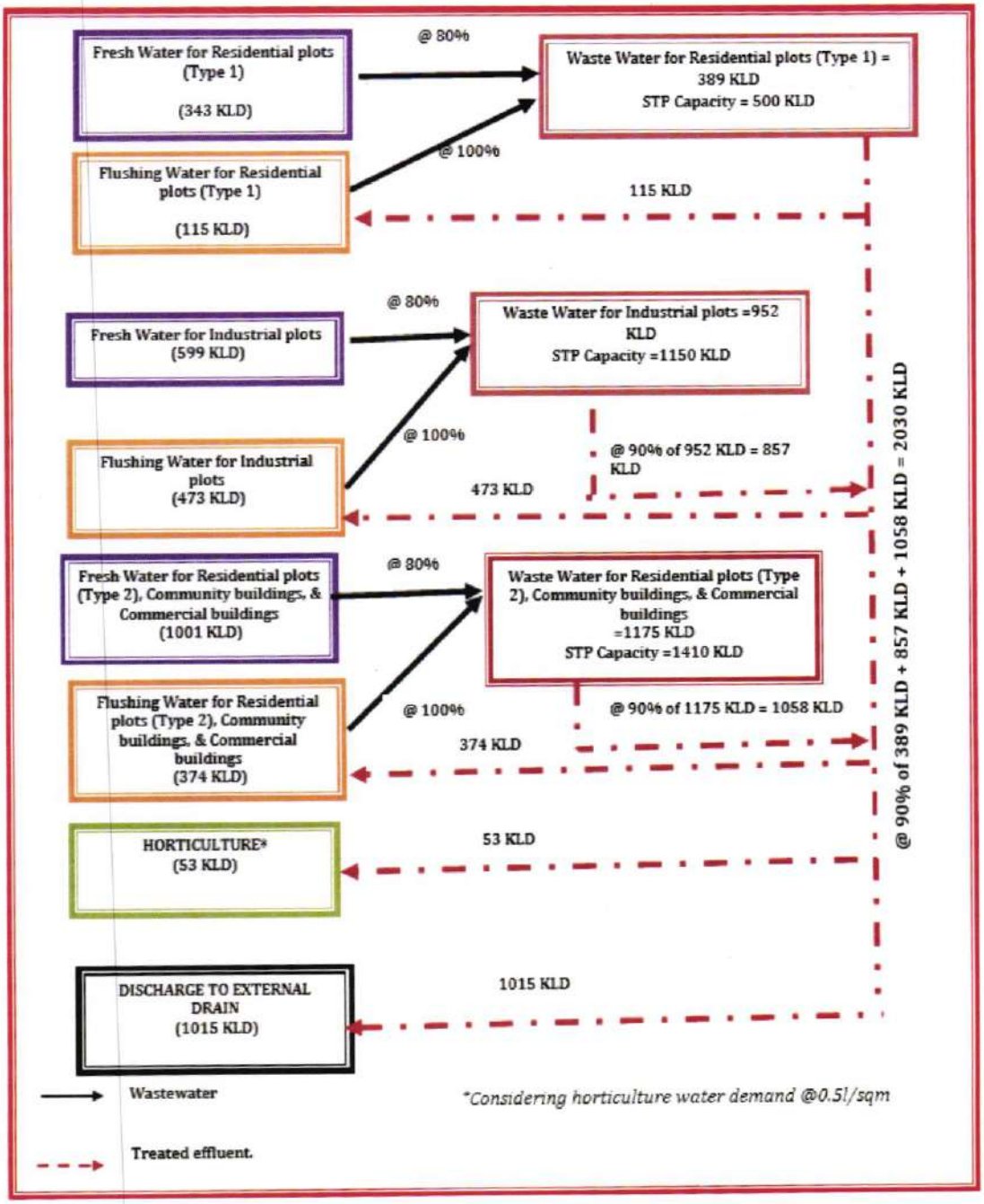


Figure 5: Water Balance Diagram (Monsoon Season)

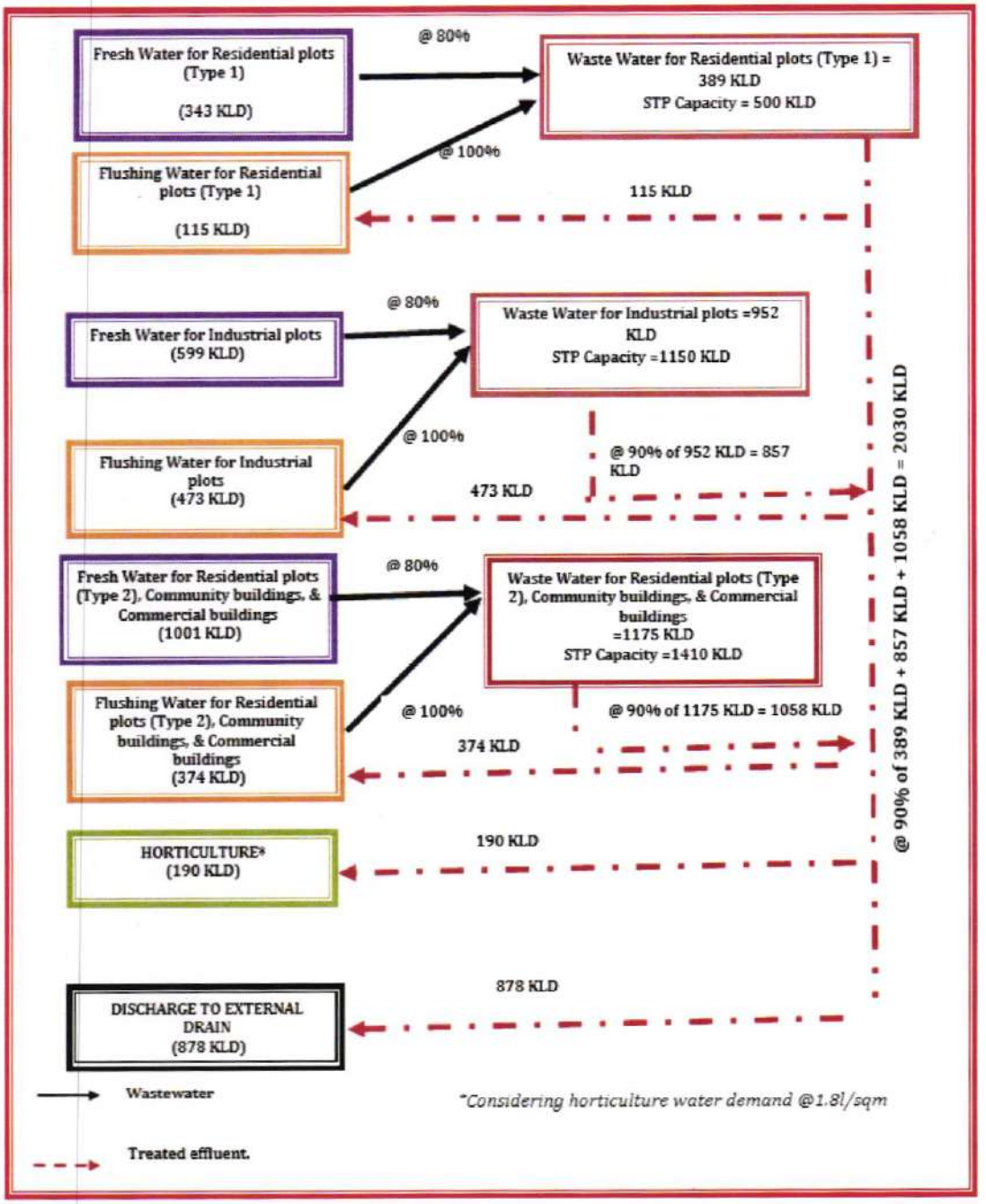


Figure 6: Water Balance Diagram (Winter Season)

2.2. What is the capacity (dependable flow or yield) of the proposed source of water?

During the Construction Phase the Source of water will be Ground water. During operation phase, the source of water supply will be GMDA. The total water requirement for the project will be approx. 3,221 KLD.

The domestic water demand for Residential (Type 1 & 2), Community Buildings, Commercial Buildings, & industrial Plots is 2905 KLD. The freshwater requirement for Residential (Type1 &2), Community Buildings, Commercial Buildings, & industrial Plots will be 1943 KLD. However, one-time freshwater demand for the project will be 3,221 KLD.

2.3 What is the quality of water required, in case, the supply is not from a municipal source? (Provide physical, chemical, Biological characteristics with class of water quality).

During the Construction Phase the Source of water will be Ground water. During operation phase, the source of water supply will be GMDA. The total water requirement for the project will be approx. 3,221 KLD.

The domestic water demand for Residential (Type 1 & 2), Community Buildings, Commercial Buildings, & industrial Plots is 2905 KLD. The freshwater requirement for Residential (Type1 &2), Community Buildings, Commercial Buildings, & industrial Plots will be 1943 KLD. However, one-time freshwater demand for the project will be 3,221 KLD.

The quality of water conforms to the desirable drinking water standards as per IS: 10500.

2.4 How much of water requirement can be met from the recycling of treated wastewater? (Give the details of quantities, sources and usage)

Approx. 2516 KLD wastewater will be generated from the **Residential plots (Type 1 & 2), Community buildings, Commercial buildings & Industrial plots**. Wastewater will be treated in an in-house STP of total capacity 3060 KLD (500 KLD +1410 KLD +1150 KLD).

STP 1 [For Residential plots (Type 1)]: 500KLD

STP 2 [For Residential plots (Type 2), Community buildings, & Commercial buildings]: 1410 KLD

STP 3 [For Industrial plot]:1150 KLD

Treated wastewater will be used for flushing and horticulture and remaining water will discharge to External sewer.

2.5 Will there be diversion of water from other users? (Please assess the impacts of the project on other existing uses and quantities of consumption).

No. There will not be any diversion of water from other users. Rise in water demand is a local phenomenon but the project would only involve spatial shifting of water demand within a region.

2.6 What is the incremental pollution load from wastewater generated from the proposed activity? (Give details of the quantities and composition of wastewater generated from the proposed activity)

Approx. 2516 KLD wastewater will be generated from the **Residential plots (Type 1 & 2), Community buildings, Commercial buildings & Industrial plots**. Wastewater will be treated in an in-house STP of total capacity 3060 KLD (500 KLD +1410 KLD +1150 KLD).

STP 1 [For Residential plots (Type 1)]: 500KLD

STP 2 [For Residential plots (Type 2), Community buildings, & Commercial buildings]: 1410 KLD

STP 3 [For Industrial plot]:1150 KLD

Treated wastewater will be used for flushing and horticulture and remaining water will discharge to External sewer.

2.7 Give details of the water requirements met from water harvesting? Furnish details of the facilities created.

The storm water collection system for the premises shall be self-sufficient to avoid any collection/stagnation and flooding of water. The amount of storm water run-off depends upon many factors such as intensity and duration of precipitation, characteristics of the tributary area and the time required for such flow to reach the drains. The drains shall be located near the carriageway along either side of the roads. Taking advantage of road camber, the rainfall run off from roads shall flow towards the drains. Storm water from various plots/shall be connected to adjacent drain by a pipe through catch basins. Therefore, it has been calculated to provide 65 rainwater harvesting pits at selected locations, which will catch the maximum run-off from the site.

1) Since the existing topography is congenial to surface disposal, a network of storm water pipe drains is planned adjacent to roads. All building roof water will be brought down through rainwater pipes.
2) Proposed storm water system consists of pipe drain, catch basins and seepage pits at regular intervals for rainwater harvesting and ground water recharging.
3) The peak hourly rainfall of 45 mm/hr shall be considered for designing the storm water drainage system.

Rainwater harvesting has been catered to and designed as per the guideline of CGWA. Peak hourly rainfall has been considered as 45 mm/hr. The recharge pit of 2.5m diameter and 4 m depth is constructed for recharging the water. Inside the recharge pit, a recharge bore is constructed having adequate diameter and depth. The bottom of the recharge structure will be kept 5 m above this level. At the bottom of the recharge well, a filter media is provided to avoid choking of the recharge bore. Design specifications of the rainwater harvesting plan are as follows:

- Catchments/roofs would be accessible for regular cleaning.
- The roof will have a smooth, hard and dense surface which is less likely to be damaged allowing the release of material into the water. Roof painting has been avoided since most paints contain toxic substances and may peel off.
- All gutter ends will be fitted with a wire mesh screen and a first flush device would be installed. Most of the debris carried by the water from the rooftop like leaves, plastic bags and paper pieces will get arrested by the mesh at the terrace outlet and to prevent contamination by ensuring that the runoff from the first 20 minutes of rainfall is flushed off.
- No sewage or wastewater would be admitted into the system.
- No wastewater from areas likely to have oil, grease, or other pollutants has been connected to the system.

Calculations for storm water load:

Green Area = 37,241.664m^2

Paved Area = 1,69,855.489m^2

Mean monthly rainfall for District as per IMD = 45 mm

Run-off from Green area = 105302.64 x 0.045 x 0.20
= 947.72 m^3
Run-off from Paved area = 1, 69,855.489 x 0.045 x 0.70
= 5,350.447m^3
Total runoff load from green and paved area = 947.72 + 5,350.447**= 6,298.167 m^3**
Taking 20 minutes Retention Time, Total volume of storm water = 6,298.167/3
= 2,099.389 m^3
Taking the effective diameter and depth of a Recharge pit 2.5m and 4 m respectively, Volume of a single Recharge pit = $\pi r^2 h$ = 3.14 × 1.6× 1.6× 4= 32 m^3
Hence No. of pits required = 2,099.389/32 = 65 pits
A total of 65 no. of pits proposed for artificial ground water recharge.

2.8 What would be the impact of the land use changes occurring due to the project on the runoff characteristics (quantitative as well as qualitative) of the area in the post construction phase on a long term basis? Would it aggravate the problems of flooding or water logging in any way?

The project will include paved areas and thus the runoff from the plot is expected to increase due to reduced infiltration. However, the increased runoff will not cause flooding or water logging as a well-designed storm water drainage will be provided. The runoff will finally be collected into rainwater harvesting tanks for groundwater recharging and rainwater harvesting pits for artificial ground water recharge. The quality of the runoff is expected to improve due to paved areas.

2.9 What are the impacts of the proposal on the ground water? (will there be tapping of ground water; give the details of ground water table, recharging capacity and approvals obtained from competent authority, if any).

Project will not use ground water during construction and operation phase; however rain water recharge pit will improve the ground water table so overall impact on ground water will be positive.

2.10 What precautions/ measures have been proposed to check the surface run-off, as well as uncontrolled flow of water into any water body?

The following management measures are suggested to protect the water quality during construction phase.

- Care would be taken to avoid soil erosion.
- Community toilets shall be constructed on the site during construction phase and the wastewater will be channelized to the septic tank in order to prevent wastewater from entering the water bodies.
- Any area with loose debris within the site shall be planted.
- To prevent surface and ground water contamination by oil/grease, leak proof containers would be used for storage and transportation of oil/grease. The floors of oil/grease handling area would be kept effectively impervious.
- Collection and settling of storm water, prohibition of equipment wash downs, and prevention of soil loss and toxic release from the construction site will be adhered to minimize water pollution.

2.11 How is the storm water from within the site managed? (State the provisions made to avoid flooding of the area, details of the drainage facilities provided along with a site layout indication contour levels).

Most of the storm water produced on site will be harvested for ground water recharge. Thus proper management of this resource is a must to ensure that it is free of contamination. A detailed Storm Water Management Plan will be developed which will consider the sources of storm water. The plan will incorporate best management practices which will include the following:

- Regular inspection and cleaning of storm drains.
- Installation of clarifiers or Oil/Water separators system of adequate capacity around parking areas and garages as per requirement.
- Cover waste storage areas.
- Avoid application of pesticides and herbicides before wet season.
- Conducting routine inspections to ensure cleanliness.
- Preparation of spill response plans, particularly for fuel and oil storage areas.
- Good housekeeping in the above areas.

2.12 Will the deployment of construction laborers particularly in the peak period lead to unsanitary conditions around the project site (Justify with proper explanation).

No, we will be providing Mobile STP during construction phase.

2.13 What on-site facilities are provided for the collection, treatment & safe disposal of sewage? (Give details of the quantities of wastewater generation, treatment capacities with technology & facilities for recycling and disposal).

Approx. 2516 KLD wastewater will be generated from the **Residential plots (Type 1 & 2), Community buildings, Commercial buildings & Industrial plots**. Wastewater will be treated in an in-house STP of total capacity 3060 KLD (500 KLD +1410 KLD +1150 KLD).

STP 1 [For Residential plots (Type 1)]: 500KLD

STP 2 [For Residential plots (Type 2), Community buildings, & Commercial buildings]: 1410 KLD

STP 3 [For Industrial plot]:1150 KLD

Treated wastewater will be used for flushing and horticulture and remaining water will discharge to External sewer.

2.14 Give details of dual plumbing system if treated waste used for flushing of toilets or any other use.

Dual plumbing system that utilizes separate piping systems for freshwater and recycled Sullage will be adopted for the project. The recycled water system shall utilize this treated Sullage and serve for non-contact uses such as flushing and horticulture.

3. VEGETATION

3.1 Is there any threat of the project to the biodiversity? (Give a description of the local ecosystem with its unique features, if any).

No ecologically sensitive area falls within the project site. Hence, no ecological/ biological threat will be anticipated.

3.2 Will the construction involve extensive clearing or modification of vegetation? (Provide a detailed account of the trees & vegetation affected by the project)

The project does not support any significant vegetation. It is to develop a peripheral greenbelt of native plant species to enhance the aesthetic value of the region and also provide an excellent habitat for various faunal groups.

3.3 What are the measures proposed to be taken to minimize the likely impacts on important site – features (Give details of proposal for tree plantation, landscaping creation of water bodies, etc. along with a layout plan to an appropriate scale?)

Green belt will be developed along the periphery of the project premises along with the internal parks and lawns. The project being a well-planned activity will result in organized open spaces and green areas. Total green area measures 1,05,302.64 m^2 (Shelter belt, Avenue plantation and lawn) of project site.

4. FAUNA

4.1 Is there likely to be any displacement of fauna both terrestrial and aquatic or creation of barriers for their movement? Provide the details.

No. The existing land use around the site is urban and does not provide a habitat for wild species. A few species of butterfly, avifauna and reptiles were recorded during the course of survey, which are common and found abundantly in this region. The proposed peripheral greenbelt will provide an excellent habitat for the native fauna.

4.2 Any direct or indirect impacts on the avifauna of the area? Provide details.

The project will not have any direct or indirect impacts on the avifauna of the area. However, planting of fruit bearing trees in the proposed greenbelt will be an attraction to the local bird population.

4.3 Prescribe measures such as corridors, fish ladders etc. to mitigate adverse impacts on fauna.

Not applicable.

5. AIR ENVIRONMENT

5.1 Will the project increase atmospheric concentration of gases & result in heat islands? (Give details of background air quality levels with predicted values based on dispersion models taking into account the increased traffic generation as a result of the proposed construction).

Ambient air monitoring will be carried out at the project site during the environmental assessment.

During the post construction phase, cars, scooter/motorcycle will be owned for the commercial purpose. Vehicular emissions will be major source of air pollution in addition to DG sets. Quantum and dispersion of pollutants form vehicular emission will depend upon the following:

- Volume of traffic on the roads,
- Meteorological conditions.
- Emission sources from DG sets.

From vehicular emissions, PM, NO_2 and CO are pollutants of primary concern. The dispersion of vehicular emissions would be confined within 100 m from the road and concentration will decrease with the increase in distance from road. It is anticipated that the contribution of vehicular emissions in ambient air quality will be marginal but well within the stipulated National Ambient. At higher wind speed dispersion will be faster.

Air Environment

Impact: During the post construction phase, cars, scooter/motorcycle will be owned for the commercial purpose. Vehicular emissions will be major source of air pollution in addition to DG set. Quantum and dispersion of pollutants form vehicular emission will depend upon the following:

- Volume of traffic on the roads,
- Meteorological conditions.
- Emission sources from DG sets.

From vehicular emissions, PM, NO_x, and CO are pollutants of primary concern. The dispersion of vehicular emissions would be confined within 100 m from the road and concentration will decrease with the increase in distance from road. It is anticipated that the contribution of vehicular emissions in ambient air quality will be marginal but well within the stipulated National Ambient. At higher wind speed dispersion will be faster.

Air Quality Modeling:

The only source of emissions from the project is the operation of backup generator during grid power failure. Detailed air quality modeling has been carried out for predicting the concentration of different pollutants contributed by the project during operation of the backup generators.

Mitigation Measures: It is proposed to develop a green belt inside the premises of the project site and along the internal roads, which will work as barrier for the movement of pollutants and help in pollution control.

5.2 What are the impacts on generation of dust, smoke, odorous fumes or other hazardous gases? Give details in relation to all the meteorological parameters.

Source of pollution:-

As per dispersion modeling of pollutants from DG set, predicted resultant GLC for various air pollutants are found insignificant within the NAAQS norms.

5.3 Will the proposal create shortage of parking space for vehicles? Furnish details of the present level of transport infrastructure and measures proposed for improvement including the traffic management at the entry and exit to the project site.

Adequate provision will be made for car/vehicle parking at the project site. There shall also be adequate parking provisions for visitors so as not to disturb the traffic and allow smooth movement at the site.

For plotted development the parking shall be within the plots by the individual plot owners.

5.4 Provide details of the movement patterns with internal roads, bicycle tracks, pedestrian pathways, footpaths, etc. with areas under each category.

Internal roads of adequate width, footpaths/pedestrian pathways have been well planned for the project.

5.5 Will there be significant increase in traffic noise & vibrations? Give details of the sources and the measures proposed for mitigation of the above.

Significant noise impacts have been carried out within and outside of the project site. Noise, due to the traffic within the site, will result in a marginal increase in the noise levels because noise control measures shall be provided in vehicles and the DG set as mentioned below, which will cause a slight increase in the noise level.

5.6 What will be the impact of D.G. set and other equipment on noise levels and vibration in ambient air quality around the project site? Provide details.

During operation, vehicular movement and operation of DG Set are the major sources of noise pollution. But both these activities- DG Set and vehicular movement will not have any significant impact on the people residing in the area. Since DG Set will not be operational continuously and will be enclosed with suitable enclosures, hence no or minimal impact will be anticipated. It is envisaged that the movement of the motor vehicles will be restricted to designated carriageways only.

Impacts on Air Quality due to DG Set:

- Impacts on ambient air during operation phase would be due to emissions from the stacks attached to backup DG set only during grid power failure.

Mitigation Measures for Impacts of DG Set on Ambient Air Quality:

- Back up DG Set will comply with the applicable emission norms.
- Adequate stack height for DG Set will be provided as per norms.
- Back up DG Set will be used only during power failure.
- Monitoring of emissions from DG Set and ambient air quality will be carried out as per norms.

Noise Control Measures for DG Set:

- DG Set room will be provided to insure 75 dB (A) insertion loss as per the regulations.
- Adequate exhaust mufflers will be provided as per norms to limit the noise.

6. AESTHETICS

6.1 Will the proposed construction in any way result in the obstruction of a view, scenic amenity or landscapes? Are these considerations taken into account by the proponents?

The proposed project will not result in obstruction of any view, scenic amenity or landscape.

6.2 Will there be any adverse impacts from new constructions on the existing structures? What are the considerations taken into account?

No. Following measures have been proposed to minimize the impact from proposed project on the existing structures in vicinity:

- Design of proposed building as per IS codes to ensure structural stability.
- Restricting dust by covering of under construction building.
- Transportation of construction waste and material through covered trucks.
- Disposal of excavated earth through a local vendor.
- Disposal of solid waste through an authorized agency, etc.

6.3. Whether there are any local considerations of urban form & urban design influencing the design criteria? They may be explicitly spelt out.

The project has been designed as per local norms.

6.4 Are there any anthropological or archaeological sites or artifacts nearby? State if any other significant features in the vicinity of the proposed site have been considered?

No anthropological or archaeological sites or artifacts exist near the site.

7. SOCIO-ECONOMIC ASPECTS

7.1 Will the proposal result in any changes to the demographic structure of local population? Provide the details.

No such changes anticipated.

Construction phase: Since local labourers will be engaged during construction phase, alteration to the existing demographic profile of the area is not anticipated.

Operation phase: The changing demography in the area is another impact that needs attention. The project will mainly lead to spatial redistribution of local population and hence no considerable influx of population is envisaged owing to the project.

7.2 Give details of the existing social infrastructure around the project.

Table 6: Social Infrastructure

Name	Distance (In km)	Direction
Schools		
Rajendra Public School, Gurugram	0.15	NW
Virat International School, Kapriwas	1	W
College		
Government College, Shidhrawali	1.2	N
Rao Lal Singh College of Education	2	N
Hospital		
Vardaan Hospital, Dharuhera	5	SW
Gangaram Hospital And Trauma Centre	5.8	NE
Temple		
Panchmukhi Hanuman Mandir	3.9	S

7.3 Will the project cause adverse effects on local communities, disturbance to sacred sites or other cultural values? What are the safeguards proposed?

Construction phase: There are no religious sites or archeological monuments of historical significance on the project site. Hence, no adverse impact in this regard is anticipated. Rather, this phase will generate jobs that relate to unskilled, semi-skilled as well as skilled labour category. Few supervisory positions will also open up, for which local candidates will be considered based on merit.

Operation phase: The project will provide goods storage facility in the area, thereby provide the jobs opportunity. A project of such scale will also boost the local economy.

8. BUILDING MATERIALS

8.1 May involve the use of building materials with high embodied energy. Are the construction materials produced with energy efficient processes? (Give details of

energy conservation measures in the selection of building materials and their energy efficiency)

The proposed project is construction of Industrial Park Project. The proposed building will not be centrally air conditioned, the selection of building materials plays a major role in the energy consumption. The proposed project will make attempts to use to avoid building materials with high embodied energy. The glass used in the building will be minimal quantity, low emissivity and having U value as per ECBC norms to the extent possible. GGBS, industrial waste will be part of Concrete.

8.2 Transport and handling of materials during construction may results in pollution, noise and public nuisance. What measures are taken to minimize the impacts?

Mitigation Measures for Air Pollution during Construction Stage:

- Construction materials will be suitably covered with tarpaulin cover etc during transportation.
- Water sprinkling shall be done on haul roads where dust generation is anticipated.
- Raw material storage and handling yard will be enclosed from all sides.
- To minimize the occupational health hazard, proper personal protective gears i.e. mask shall be provided to the workers working in the dust prone areas.

Mitigation Measures for Noise Pollution during Construction Stage:

- Administrative as well as engineering control of noise will be implemented.
- Isolation of noise generation sources and temporal differentiation of noise generating activities will ensure minimum noise at receiver's end.
- To prevent any occupational hazard, earmuff / earplug shall be given to the workers working around construction plant & machinery emitting high noise levels.
- Use of such plant or machinery shall not be allowed during night time. Careful planning of machinery operation and scheduling of operations shall be done to minimise such impact.

8.3 Are recycled materials used in roads and structures? State the extent of savings achieved?

GGBS (Ground Granulated Blast-furnace Slag), industrial waste will be part of Concrete.

8.4 Give detail of the methods of collection, segregation & disposal of the garbage generated during the operation phases of the project.

The solid waste of the project will be segregated into biodegradable waste and non-biodegradable. Biodegradable waste and non-biodegradable waste will be collected in separate colored bins. The recyclable wastes will be sent off to recyclables. Proper guidelines for segregation, collection and storage will be prepared as per Municipal Solid Wastes (Management and Handling) Rules, 2016.

Table 7: Calculation of Solid Waste Generation

S. No.	Description	Occupancy	Norms (kg/capita/day)	Waste Generated (kg/day)
1.	**Domestic Solid Waste for Residential plots**			
	• Residential plots	17316	0.5	8658
2.	**Domestic Solid Waste for Industrial plots**			
	• Industrial Plots	23035	0.25	5759
3.	Staff (Residential Maintenance, Community, Commercial, & Industrial)	2070	0.25	518
4.	Visitors(Residential, Community, Commercial, & Industrial)	19060	0.15	2,859
5.	Horticultural Waste (26 acres)	@ 0.2 kg/acre/day		5.2
6.	STP Sludge	Sludge generated x 0.35 x B.O.D difference/1000		343.434
Total Solid Waste Generation = 18,143 kg/day				

9. ENERGY CONSERVATION

9.1 Give details of the power requirements, source and supply, backup source etc. What is the energy consumption assumed per square foot of built-up area? How have you tried to minimize energy consumption?

The power shall be supplied by the State Electricity Board. The maximum load demand for the project will be approx. 12883 kW.

Details of D.G Sets: There is provision of 2no. of DG set of total capacity 1100kVA for Commercial Facility which includes 1 x 750kVA +1x 350 kVA and 2no. of DG set of total capacity 1750 kVA for Common Services which includes 1 x 750kVA +1x 1000 kVA are proposed for power back up. The DG sets will be equipped with acoustic enclosure to minimize noise generation and adequate stack height for proper dispersion.

Effective measures have been incorporated to minimize the energy consumption in following manners:

- All external lighting shall be LED
- All common spaces including street lights (where there is no use of light for reading purposes), shall be of "LED".
- Astronomical timer based controllers will be used for automatic dusk to dawn operation of street lights.
- Staircases can be motion sensor based lighting.

9.2 What type and capacity of power backup do you plan to provide?

There is provision of 2no. of DG set of total capacity 1100kVA for Commercial Facility which includes 1 x 750kVA +1x 350 kVA and 2no. of DG set of total capacity 1750 kVA for Common Services which includes 1 x 750kVA +1x 1000 kVA are proposed for power back up. The DG sets will be equipped with acoustic enclosure to minimize noise generation and adequate stack height for proper dispersion.

9.3 What are the characteristics of the glass you plan to use? Provide specifications of its characteristics related to both short wave and long wave radiation?

Clear glass will be used for fenestration purposes only.

Characteristics are as under: U-value : 5.8 $W/m^2 K$

Shading coefficient (SC): 0.9

Visual light transmission: 85% (for regularly occupied spaces)

9.4 What passive solar architectural features are being used in the building? Illustrate the applications made in the project.

Passive solar design refers to use of the sun's energy for the heating and cooling of living spaces. Pergolas, projections, façade elements, metal louvers will be provided for sun shading to reduce the heat influx into the building and thus reduce the air conditioning loads.

9.5 Does the layout of street & building maximize the potential for solar energy devices? Have you considered the use of street lighting, emergency lighting and solar hot water systems for use in the building complex? Substantiate with details.

We will install solar power generation system of the capacity Minimum 50 Kilo Watt peak (KWp) as per Haryana Building bye-laws.

Solar energy will be utilized for street lighting, solar blinkers and signages to reduce electricity consumption.

9.6 Is the shading effectively used to reduce cooling/heating lands? What principles have been used to maximize the shading of walls on the East and the West and the Roof? How much energy saving has been effected?

Not applicable.

9.7 Do the structures use energy-efficient space conditioning, lightening and mechanical systems? Provide technical details. Provide details of the transformers and motor efficiencies, lightening intensity and air conditioning load assumption? Are you using CFC and HCFC free chillers? Provide specifications.

All chillers for air conditioners will be CFC & HCFC free. Well-designed building structures will allow natural light to enter. Measures prescribed in Energy Conservation Building Code 2007 will be adopted to the extent possible to reduce the heat influx by walls, roofs and openings. Only prescribed quality of glasses will be used.

9.8 What are the likely effects of the building activity in altering the micro-climates? Provide a self-assessment on likely impacts of the proposed construction on creation of heat island & inversion effects?

The approximately 33% of site area is landscaped. White tiles will be used in roof areas and tiles with SRI>29 will be used in non-roof areas (hardscaped areas), in line with IGBC guidelines, to reduce heat island effect and mitigate any impact on microclimate.

9.9 What are the thermal characteristics of the building envelope? (a) Roof (b) external walls and (c) fenestration? Give details of the material used and the U value or the R values of the individual components.

Overdeck insulation will be provided in roof-top. External wall be RCC. Approx. U-values have been provided below:

S. No.	Component	U-value (W/m^2-K)
(a)	Roof	1.2
(b)	External wall	3.7

9.10 What precautions & safety measures are proposed against fire hazards? Furnish details of emergency plans.

Firefighting measures will be adopted as per the guidelines of NBC. External yard hydrants shall be installed around all buildings in the complex in galvanized steel fire house cabinet (weather proof). All external yard hydrants shall be at one meter height from finished ground level as per NBC at a distance of 60 m along the road. External fire hydrants shall be located such that no portion of any building is more than 45 m from a hydrant and the external hydrants are not vulnerable to mechanical or vehicular damage.

Fire hydrant system will be provided within the buildings, fire escape staircases and refuge areas will be provided and the building structures will be planned as per NBC, 2016. In addition, 10 kg fire extinguishers will be provided for class A, B, and C fires. CO_2 extinguishers will also be provided

Disaster Management Plan

PRECAUTION & MITIGATORY METHODS TO PREVENT DISASTERS:

- Complex is planned to reduce the impact of disasters and to encourage recovery.
- A disaster management cell would be established which will take care of post disaster scenario.
- It would be a volunteer kind of set-up and professionals can also be hired in case of eventuality.
- Complex management and maintenance agency will prepare an integrated, comprehensive management plan.

PRECAUTION & MITIGATORY METHODS TO PREVENT DISASTERS:

(Earthquake Management)

- At the time of designing and constructing the building due care would be taken to have earthquake resistant structures which will conform to IS 1983.
- New systems and devices using non-conventional civil engineering materials would be developed to reduce the earthquake forces acting on structure.

PRECAUTION & MITIGATORY METHODS TO PREVENT DISASTERS:

(Fire Hazard)

- Fire safety would be taken into account and would follow all the safety norms and regulations as per the NBC and other related Indian Standards.
- All electrical cables would be underground and sophisticated modern electrical distribution system to reduce risk of fire.
- Special firefighting equipment's like Automatic Fire Detection and alarm system, automatic Sprinkler System etc. would be installed as per the NBC standards.
- Risk assessment with onsite disaster management plan will be specified to fire, smoke and other emergency conditions.

9.11 If you are using glass as wall materials, provide details and specifications including emissivity and thermal characteristics.

The project being a Industrial Plotted Colony Project will not involve use of much glass as wall material. All fenestration with U-factors, SHGC, or visible light transmittance determined, certified and labeled in accordance ISO 15099 shall be adopted.

9.12 What is the rate of air infiltration in to the building? Provide details of how you are mitigating the effects of infiltration.

There will be provisions for ample natural ventilation.

9.13 To what extent the non-conventional energy technologies are utilized in the overall energy consumption? Provide details of the renewable energy technologies used.

Solar energy will be variedly used to meet the energy requirements of as:

- We shall be exploring utilization of solar energy in the form of solar street lighting and warehouse power requirement wherever feasible in our premises.
- LEDs will be used to minimize the energy consumption.
- Green area is provided along with tree plantation which will result in natural air cooling and will reduce the load on conventional energy sources.

10. ENVIRONMENT MANAGEMENT PLAN

The Environment Management Plan (EMP) would consist of all mitigation measures for each component of the environment due to the activities increased during the construction, operation and the entire life cycle to minimize adverse environmental impacts resulting from the activities of the project. It would also delineate the environmental monitoring plan for compliance of various environmental regulations. It will state the steps to be taken in case of emergency such as accidents at the sites including fire. The detailed EMP for the complex is given below.

During operation phase, the capital will be 797 lakhs and recurring cost will be 189.5 lakh / year.

10.1 Environmental Management Plan

The Environment Management Plan (EMP) is a site specific plan developed to ensure that the project is implemented in an environmental sustainable manner where all contractors and subcontractors, including consultants, understand the potential environmental risks arising from the project and take appropriate actions to properly manage that risk. EMP

also ensures that the project implementation is carried out in accordance with the design by taking appropriate mitigation actions to reduce adverse environmental impacts during its life cycle. The plan outlines existing and potential problems that may adversely impact the environment and recommends corrective measures where required. Also, the plan outlines roles and responsibility of the key personnel and contractors who will be in-charge of the responsibilities to manage the project site.

10.1.1 The EMP is generally

- Prepared in accordance with rules and requirements of the MoEF & CC and CPCB/ SPCB
- To ensure that the component of facility are operated in accordance with the design
- A process that confirms proper operation through supervision and monitoring
- A system that addresses public complaints during construction and operation of the facilities
- A plan that ensures remedial measures is implemented immediately.

The key benefits of the EMP are that it offers means of managing its environmental performance thereby allowing it to contribute to improved environmental quality. The other benefits include cost control and improved relations with the stakeholders.

EMP includes four major elements:

- Commitment & Policy: The management will strive to provide and implement the Environmental Management Plan that incorporates all issues related to air, water, land and noise.
- Planning: This includes identification of environmental impacts, legal requirements and setting environmental objectives.
- Implementation: This comprises of resources available to the developers, accountability of contractors, training of operational staff associated with environmental control facilities and documentation of measures to be taken.
- Measurement & Evaluation: This includes monitoring, counteractive actions and record keeping.

It is suggested that as part of the EMP, a monitoring committee would be formed by M/s Signatureglobal India Limited comprising of the site in-charge/coordinator, environmental group representative and project implementation team representative. The committee's role would be to ensure proper operation and management of the EMP including the regulatory compliance.

The components of the environmental management plan, potential impacts arising, out of the project and remediation measures are summarized below in **Table 8.**

TABLE 8: SUMMARY OF POTENTIAL IMPACTS AND REMEDIAL MEASURES

S. No.	Environmental components	Potential Impacts	Potential Source of Impact	Controls Through EMP & Design	Impact Evaluation	Remedial Measures
1.	Ground Water Quality	Ground Water Contamination	Construction Phase • Wastewater generated from temporary labor tents.	• No surface accumulation will be allowed.	No significant impact as majority of labors would be locally deployed	
			Operation Phase • Discharge from the project	• Waste water will be treated in STP.	No negative impact on ground water quality envisaged. Not significant.	
2.	Ground Water Quantity	Ground Water Depletion	Construction Phase • Ground water will not be used for construction activity	• No impact	No significant impact on ground water quantity envisaged.	
			Operation Phase • The source of water during	• Rain water harvesting scheme.	No significant impact on surface/ground	In an unlikely event of non-availability of

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			operation phase is Municipal water supply.	• Storm water collection for water harvesting. • Percolation well to be introduced in landscape plan. • Awareness Campaign to reduce the water consumption	water quantity envisaged.	water supply, water will be brought using tankers.
3.	Surface Water Quality	Surface water contamination	<u>Construction Phase</u> • Surface runoff from site during construction activity.	• Silt traps and other measures such as additional on-site diversion ditches will be constructed to control surface run-off during site development	No off-site impact envisaged as no surface water receiving body is present in the core zone.	
			<u>Operation Phase</u> • Discharge of domestic wastewater to	• Waste water will be treated in STP.	No off-site impact envisaged	CPCB guidelines will be followed for disposal of sewage.

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			STP for treatment and reuse.			
4.	Air Quality	Dust Emissions	<u>Construction Phase</u> • All heavy construction activities	• Suitable control measures will be adopted for mitigating the $PM_{2.5}$ & PM_{10} level in the air as per air pollution control plan.	Not significant because dust generation will be temporary and will settle fast due to dust suppression techniques.	During construction phase the contractors are advised to facilitate masks for the labors. Water sprinklers will be used for suppression of dust during construction phase.
		Emissions of $PM_{2.5}$ & PM_{10}, SO_2, NOx and CO	<u>Construction Phase</u> • Operation of construction equipment and vehicles during	• Rapid on-site construction and improved maintenance of equipment	Not significant.	Regular monitoring of emissions and control measures will be taken to

			site development. • Running D.G. set (back up)			reduce the emission levels.
			<u>Operation Phase</u> • Power generation by DG set during power failure • Emission from vehicular traffic in use	•Use of low sulphur diesel if available •Providing Footpath and pedestrian ways within the site Green belt will be developed with specific species to help to reduce $PM_{2.5}$ & PM_{10} level •Use of equipment fitted with silencers •Proper maintenance of equipment	Not significant. DG set would be used as power back-up (approx. 4 hours) No significant increase in ambient air quality level is expected from the project's activities. There are no sensitive receptors located within the vicinity of site.	• Use of Personal Protective Equipment (PPE) like earmuffs and earplugs during construction activities. • Stack height of DG set above the tallest building as per CPCB standards
5.	Noise					

	Environment					
			Operation Phase • Noise from vehicular movement • Noise DG set operation	• Green Belt Development • Development of silence zones to check the traffic movement • Provision of noise shields near the heavy construction operations and acoustic enclosures for DG set. • Construction activity will be limited to time hours only • DG set room will be equipped with acoustic enclosures	No significant impact due to suitable width of Greenbelt.	

6.	Land Environment	Soil contamination	<u>Construction Phase</u> • Disposal of construction debris	Construction debris will be collected and suitably used on site as per the solid waste management plan for construction phase	No significant impact. Impact will be local, as waste generated will be reused for filling of low lying areas etc.	
			<u>Operation Phase</u> • Generation of municipal solid waste • Used oil generated from DG set.	• It is proposed that the solid waste generated will be managed as per MSW Rules, 2016. • Collection, segregation, transportation and disposal will be done as per MSW Management Rules, 2016 by the authorized agency	Since solid waste is handled by the authorized agency, waste dumping is not going to be allowed. Not significant. Negligible impact.	

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				• Used oil generated will be sold to authorized recyclers		
7.	Biological Environment (Flora and Fauna)	Displacement of Flora and Fauna on site	<u>Construction Phase</u> • Site Development during construction	• Important species of trees, if any, will be identified and marked and will be merged with landscape plan		
			<u>Operation Phase</u> • Increase in green covered area	• Suitable green belts will be developed as per landscaping plan in and around the site using local flora	Beneficial impact.	
8.	Socio-Economic Environment	Population displacement and loss of income	<u>Construction Phase</u> • Construction activities leading to	• The project will be developed as per the GMDA.	No negative impact.	

			relocation			
			Operation Phase • Site operation	• Project will provide employment opportunities to the local people in terms of labor during construction and service personnel (guards, securities, gardeners, etc) during operations • Providing quality-Integrated infrastructure.	Beneficial impact	
9.	Traffic Pattern	Increase of vehicular traffic	Construction Phase • Heavy Vehicular movement during	• Heavy Vehicular movement will be restricted to time only and adequate parking facility will be provided.	No negative impact	

			construction			
			Operation Phase • Traffic due to vehicles once the project is operational	• Vehicular movement will be regulated inside the project with adequate roads and parking lots in the project.	No major significant impact as green belt will be developed which will help in minimizing the impact on environment.	

10.2 ENVIRONMENT MANAGEMENT PLAN

An Environmental Management Plan (EMP) will be required to mitigate the predicted adverse environmental impacts during construction and operation phase of the project and these are discussed in later subsections.

10.2.1 EMP for Air Environment

Construction Phase

To mitigate the impacts of PM_{10} & $PM_{2.5}$ during the construction phase of the project, the following measures are recommended for implementation:

- A dust control plan
- Procedural changes to construction activities

Dust Control Plan

The most cost-effective dust suppressant is water because water is easily available on construction site. Water can be applied using water trucks, handled sprayers and automatic sprinkler systems. Furthermore, incoming loads could be covered to avoid loss of material in transport, especially if material is transported off-site.

Procedural Changes to Construction Activities

Idle time reduction: Construction equipment is commonly left idle while the operators are on break or waiting for the completion of another task. Emission from idle equipment tends to be high, since catalytic converters cools down, thus reducing the efficiency of hydrocarbon and carbon monoxide oxidation. Existing idle control technologies comprises of power saving mode, which automatically off the engine at preset time and reduces emissions, without intervention from the operators.

Improved Maintenance: Significant emission reductions can be achieved through regular equipment maintenance. Contractors will be asked to provide maintenance records for their fleet as part of the contract bid, and at regular intervals throughout the life of the

contract. Incentive provisions will be established to encourage contractors to comply with regular maintenance requirements.

Reduction of On-Site Construction Time: Rapid on-site construction would reduce the duration of traffic interference and therefore, will reduce emissions from traffic delay.

Operation Phase

To mitigate the impacts of pollutants from DG set and vehicular traffic during the operational phase of the project, following measures are recommended for implementation:

- DG set emission control measures
- Vehicular emission controls and alternatives
- Greenbelt development

Gas based Generator Set Emission Control Measures

Adequate stack height will be maintained to disperse the air pollutants generated from the operation of DG set to dilute the pollutants concentration within the immediate vicinity. Hence no additional emission control measures have been suggested.

Vehicle Emission Controls and Alternatives

During construction, vehicles will be properly maintained to reduce emission. As it is a Industrial Plotted Colony project, vehicles will be generally having "PUC" certificate.

Footpaths and Pedestrian ways: Adequate footpaths and pedestrian ways would be provided at the site to encourage non-polluting methods of transportation.

10.2.2 EMP FOR NOISE ENVIRONMENT

Construction Phase

To mitigate the impacts of noise from construction equipment during the construction phase on the site, the following measures are recommended for implementation.

Time of Operation: Noisy construction equipment would not be allowed to use at night time.

Job Rotation and Hearing Protection: Workers employed in high noise areas will be employed on shift basis. Hearing protection such as earplugs/muffs will be provided to those working very close to the noise generating machinery.

Operation Phase

To mitigate the impacts of noise from diesel generator set during operational phase, the following measures are recommended:

- Adoption of Noise emission control technologies
- Greenbelt development

Greenbelt Development:

Green belt will be developed along the periphery of the project premises along with the internal parks and lawns. Total green area is 37,241.664 m^2

EMP FOR WATER ENVIRONMENT

Construction Phase

To prevent degradation and to maintain the quality of the water source, adequate control measures have been proposed. To check the surface run-off as well as uncontrolled flow of water into any water body check dams with silt basins are proposed. The following management measures are suggested to protect the water source being polluted during the construction phase:

- Avoid excavation during monsoon season
- Care would be taken to avoid soil erosion
- Common toilets will be constructed on site during construction phase and the wastewater would be channelized to the septic tanks in order to prevent wastewater to enter into the water bodies
- Any area with loose debris within the site shall be planted

- To prevent surface and ground water contamination by oil and grease, leak-proof containers would be used for storage and transportation of oil and grease. The floors of oil and grease handling area would be kept effectively impervious. Any wash off from the oil and grease handling area or workshop shall be drained through imperious drains.
- Collection and settling of storm water, prohibition of equipment wash downs and prevention of soil loss and toxic release from the construction site are necessary measure to be taken to minimize water pollution
- All stacking and loading area will be provided with proper garland drains, equipped with baffles, to prevent run off from the site, to enter into any water body.

Operation Phase

In the operation phase of the project, water conservation and development measures will be taken, including all possible potential for rain water harvesting. Following measures will be adopted:

- Water source development.
- Minimizing water consumption.

Water Source Development

Water source development shall be practiced by installation of scientifically designed Rain Water Harvesting system. Rainwater harvesting promotes self-sufficiency and fosters an appreciation for water as a resource.

Minimizing Water Consumption

Consumption of fresh water will be minimized by combination of water saving devices and other domestic water conservation measures. Further, to ensure ongoing water conservation, an awareness program will be introduced. The following section discusses the specific measures, which shall be implemented:

Domestic and Commercial Usage

- Use of water efficient plumbing fixtures (ultra flow toilets and urinals, low flow sinks, water efficient dishwashers and washing machines). Water efficient plumbing fixtures uses less water with no marked reduction in quality and service
- Leak detection and repair techniques.
- Sweep with a broom and pan where possible, rather than hose down for external areas.
- Meter water usage: Implies measurement and verification methods.

Monitoring of water uses is a precursor for management.

Horticulture

- Drip irrigation system shall be used for the lawns and other green area. Drip irrigation can save 15-40% of the water, compared with other watering techniques.
- Plants with similar water requirements shall be grouped on common zones to match precipitation heads and emitters.
- Use of low-angle sprinklers for lawn areas.
- Select controllers with adjustable watering schedules and moisture sensors to account for seasonal variations and calibrate them during commissioning.
- Place 3 to 5 inches of mulch on planting beds to minimize evaporation.

Storm Water Management

Most of the storm water produced on site will be harvested for ground water recharge in future. Thus proper management of this resource is a must to ensure that it is free from contamination.

Contamination of Storm Water is possible from the following sources:

- Diesel and oil spills in the diesel power generator and fuel storage area
- Waste spills in the solid / hazardous waste storage area
- Oil spills and leaks in vehicle parking lots

- Silts from soil erosion in gardens

A detailed storm water management plan will be developed which will consider the possible impacts from above sources. The plan will incorporate best management practices which will include following:

- Regular inspection and cleaning of storm drains
- Clarifiers or oil/separators will be installed in all the parking areas. Oil/ grease separators installed around parking areas and garages will be sized according to peak flow guidelines. Both clarifiers and oil/water separators will be periodically pumped in order to keep discharges within limits
- Covered waste storage areas
- Avoid application of pesticides and herbicides before wet season
- Secondary containment and dykes in fuel/oil storage facilities
- Conducting routine inspection to ensure cleanliness
- Provision of slit traps in storm water drains
- Good housekeeping in the above areas

10.2.4 EMP FOR LAND ENVIRONMENT

Construction Phase

The waste generated from construction activity includes construction debris, biomass from land clearing activities, waste from the temporary make shift tents for the labors and hazardous waste. Following section discuss the management of each type of waste. Besides waste generation, management of the topsoil is an important area for which management measures are required.

Construction Debris

Construction debris is bulky and heavy and re-utilization and recycling is an important strategy for management of such waste. As concrete and masonry constitute the majority of waste generated, recycling of this waste by conversion to aggregate can offer benefits of reduced landfill space and reduced extraction of raw material for new construction activity.

This is particularly applicable to the project site as the construction is to be completed in a phased manner.

Mixed debris with high gypsum, plaster, shall not be used as fill, as they are highly susceptible to contamination, and will be send to designated solid waste landfill site.

Metal scrap from structural steel, piping, concrete reinforcement and sheet metal work shall be removed from the site by construction contractors. A significant portion of wood scrap will be reused on site. Recyclable wastes such as plastics, glass fiber insulation, roofing, etc. shall be sold to recyclers.

Hazardous waste

Construction sites are sources of many toxic substances such as paints, solvents wood preservatives, pesticides, adhesives and sealants. Hazardous waste generated during construction phase shall be stored in sealed containers and disposed off as per The Hazardous Wastes (Management, Handling & Trans boundary Movement) Rules, 2016.

Some management practices to be developed are:

- Herbicides and pesticide will not be over applied (small-scale applications) and not applied prior to rain.
- Paintbrushes and equipment for water and oil based paints shall be cleaned within a contained area and will not be allowed to contaminate site soils, water courses or drainage systems.
- Provision of adequate hazardous waste storage facilities. Hazardous waste collection containers will be located as per safety norms and designated hazardous waste storage areas will be away from storm drains or watercourses.
- Segregation of potentially hazardous waste from non-hazardous construction site debris.
- Well labeled all hazardous waste containers with the waste being stored and the date of generation.
- Instruct employees and subcontractors in identification of hazardous and solid waste.

Even with careful management, some of these substances are released into air, soil and water and many are hazardous to workers. With these reasons, the best choice is to avoid their use as much as possible by using low-toxicity substitutes and low VOC (Volatile Organic Compound) materials.

Waste from Temporary Makes Shift Tents for Labors

Wastes generated from temporary make shift labor tents which will be managed by the contractor of the site. The wastewater generated will be channelized to the septic tank.

Top Soil Management

To minimize disruption of soil and for conservation of top soil, the contractor shall keep the top soil cover separately and stockpile it. After the construction activity is over, top soil will be utilized for landscaping activity. Other measures, which would be followed to prevent soil erosion and contamination include:

- Maximize use of organic fertilizer for landscaping and green belt development
- To prevent soil contamination by oil/grease, leaf proof containers would be used for storage and transportation of oil/grease and wash off from the oil/grease handling area shall be drained through impervious drains and treated appropriately before disposal
- Removal of as little vegetation as possible during the development and re-vegetation of bare areas after the project.
- Working in a small area at a point of time (phase wise construction)
- Construction of erosion prevention troughs/berms.

Operational Phase

The philosophy of solid waste management at the proposed complex will be to encouraging the four R's of waste i.e. **R**eduction, **R**euse, **R**ecycling and **R**ecovery (materials & energy). Regular public awareness meetings will be conducted to involve the public in the proper segregation and storage techniques. The Environmental Management Plan for the solid waste focuses on three major components during the life cycle of the waste management

system i.e., collection and transportation, treatment or disposal and closure and post-closure care of treatment/disposal facility.

Collection and Transportation

- During the collection stage, the solid waste of the project will be segregated into biodegradable waste and non-biodegradable. Biodegradable waste and non-biodegradable waste will be collected in separate bins. The recyclable wastes will be sent off to recyclables. Proper guidelines for segregation, collection and storage will be prepared as per MSW Rules, 2016.
- To minimize littering and odour, waste will be stored in well-designed containers/ bins that will be located at strategic locations to minimize disturbance in traffic flow
- Care would be taken such that the collection vehicles are well maintained and generate minimum noise and emissions. During transportation of the waste, it will be covered to avoid littering.

To reduce the quantity of packaging waste, following measures will be adopted:

- Reuse the packaging material as much as possible within the warehouse. For example, sturdy cardboard boxes and pallets can be reused many times around the warehouse before needing to be recycled.
- Ensure that materials are packaged correctly and with an appropriate amount of packaging the first time around.
- Train the warehouse staff on packaging methodology.
- Utilize appropriate filler material to ensure the smallest dimension of packaging can be utilized to protect fragile items.
- Investigate how to incorporate recyclable or degradable content for packaging. For example, cushioning can now be provided with inflatable air packs or corn-based packing, rather than utilizing non-recyclable polystyrene.

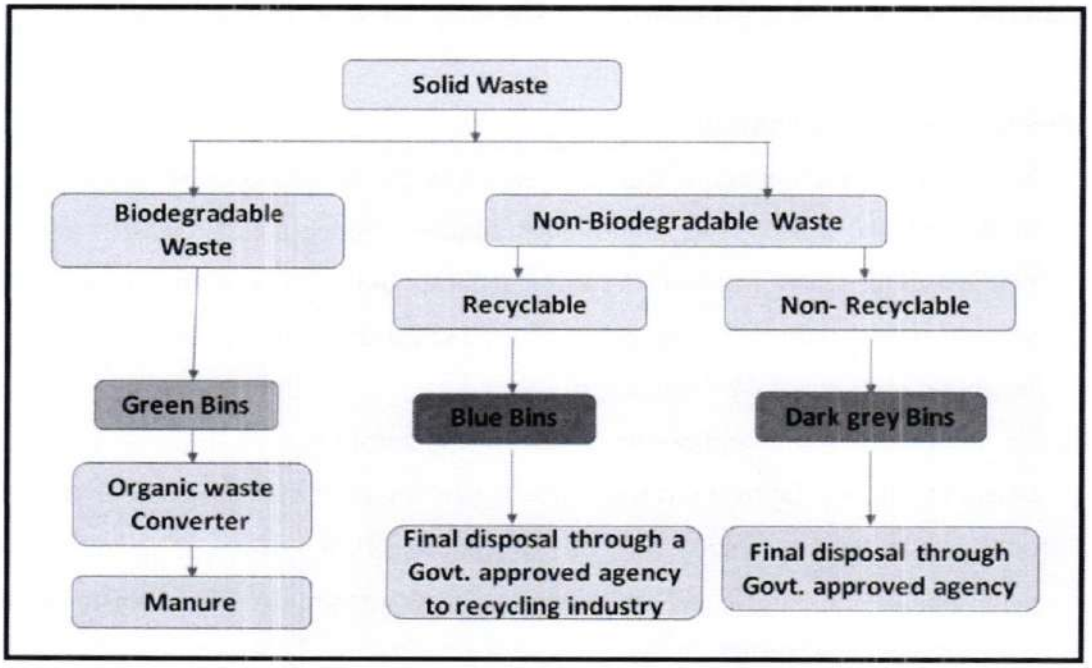


Figure 7: Waste Management Flow Diagram

Disposal

With regards to the disposal/treatment of waste, the management will take the services of the authorized agency for waste management and disposal of the same on the project site during its operational phase.

10.2.5 EMP FOR ECOLOGICAL ENVIRONMENT

Construction activity changes the natural environment. The project requires the implementation of following choices exclusively or in combination.

Construction Stage

- Restriction of construction activities to defined project areas, which are ecologically sensitive
- Restrictions on location of temporary labor tents and offices for project staff near the project area to avoid human induced secondary additional impacts on the flora and fauna species

- Cutting, uprooting, coppicing of trees or small trees if present in and around the project site for cooking, burning or heating purposes by the labors will be prohibited and suitable alternatives for this purpose will be made
- Along with the construction work, the peripheral green belt would be developed with suggested native plant species, as they will grow to a full-fledged covered at the time of completion.

Operation Stage

Improvement of the current ecology of the project site will entail the following measures:

- Plantation and Landscaping
- Green Belt Development
- Park and Avenue Plantation

The section below summarizes the techniques to be applied to achieve the above objectives:

Plantation and landscaping

Selection of the plant species would be done on the basis of their adaptability to the existing geographical conditions and the vegetation composition of the forest type of the region earlier found or currently observed.

Green Belt Development Plan

The plantation matrix adopted for the green belt development includes pit of 0.3 m × 0.3 m size with a spacing of 2 m x 2 m. In addition, earth filling and manure may also be required for the proper nutritional balance and nourishment of the sapling. It is also recommended that the plantation has to be taken up randomly and the landscaping aspects could be taken into consideration.

Peripheral plantation comprising of medium height trees (7 m to 10 m) and shrubs (5 m height) are proposed for the green belt. In addition creepers will be planted along the boundary wall to enhance its insulation capacity.

Selection of Plant Species for Green Belt Development

The selection of plant species for the development depends on various factors such as climate, elevation and soil. The plants would exhibit the following desirable characteristics in order to be selected for plantation

1. The species should be fast growing and providing optimum penetrability
2. The species should be wind-firm and deep rooted
3. The species should form a dense canopy
4. As far as possible, the species should be indigenous and locally available
5. Species tolerance to air pollutants like SO_2 and NO_2 should be preferred
6. The species should be permeable to help create air turbulence and mixing within the belt
7. There should be no large gaps for the air to spill through
8. Trees with high foliage density, leaves with larger leaf area and hairy on both the surfaces
9. Ability to withstand conditions like inundation and drought
10. Soil improving plants (Nitrogen fixing rapidly decomposable leaf litter)
11. Attractive appearance with good flowering and fruit bearing
12. Bird and insect attracting tree species
13. Sustainable green cover with minimal maintenance.

10.2.6 EMP for Socio-Economic Environment

The social management plan has been designed to take proactive steps and adopt best practices, which are sensitive to the socio-cultural setting of the region. The Social Management Plan for project focuses on the following components:

- **Income Generation Opportunity during Construction and Operation Phase**

  The project would provide employment opportunity during construction and operation phase. There would also be a wide economic impact in terms of generating opportunities for secondary occupation within and around the complex. The main principles considered for employment and income generation opportunities are out lined below:

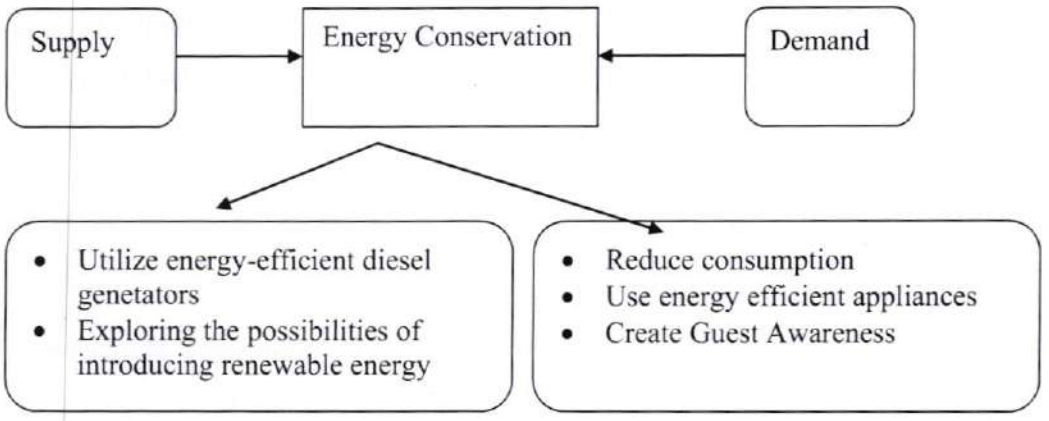
- Employment strategy will provide for preferential employment of local people

- Conditions of employment would address issues like minimum wages and medical care for the workers. Contractors would be required to abide to employment priority towards locals and abide by the labor laws regarding standards on employee terms and conditions.
- Improved Working Environment for Employees

  The project would provide safe and improved working conditions for the workers employed at the facility during construction and operation phase. With the proposed ambience and facilities provided, the complex will provide a new experience in living and recreations. Following measures would be taken to improve the working environment of the area:
- Less use of chemicals and biological agents with hazard potential
- Developing a proper interface between the work and the human resource through a system of skill improvement
- Provision of facilities for nature care and recreation e.g. indoor games facilities
- Measures to reduce the incidence of work related injuries, fatalities and diseases
- Maintenance and beautifications of the complex and the surrounding roads

10.2.7 EMP FOR ENERGY CONSERVATION

Energy conservation program will be implemented through measures taken both on energy demand and supply.



Energy conservation will be one of the main focuses during the complex planning and operation stages. The conservation efforts would consist of the following:

❖ **Architectural design**

- Maximize the use of natural lighting through design.
- The orientation of the buildings will be done in such a way that maximum daylight is available.
- The green areas will be spaced, so that a significant reduction in the temperature can take place.

❖ **Energy Saving Practices**

- Energy efficient lamps will be provided within the complex.
- Constant monitoring of energy consumption and defining targets for energy conservation.
- Adjusting the settings and illumination levels to ensure minimum energy used for desired comfort levels.

❖ **Behavioral Change on Consumption**

- Promoting public awareness on energy conservation
- Training staff on methods of energy conservation and to be vigilant to such opportunities.

10.3 ENVIRONMENTAL MANAGEMENT SYSTEM AND MONITORING PLAN

For the effective and consistent functioning of the complex, an Environmental Management system (EMS) would be established at the site. The EMS would include the following:

- An Environmental management cell.
- Environmental Monitoring.
- Personnel Training.
- Regular Environmental audits and Correction measures.
- Documentation – standards operation procedures Environmental Management Plan and other records.

10.3.1 ENVIRONMENTAL MANAGEMENT CELL

Apart from having an Environmental Management Plan, it is also proposed to have a permanent organizational set up charged with the task of ensuring its effective implementation of mitigation measures and to conduct environmental monitoring. The major duties and responsibilities of Environmental Management Cell shall be as given below:

- To implement the environmental management plan.
- To assure regulatory compliance with all relevant rules and regulations.
- To ensure regular operation and maintenance of pollution control devices.
- To minimize environmental impact of operations as by strict adherence to the EMP.
- To initiate environmental monitoring as per approved schedule.
- Review and interpretation of monitored results and corrective measures in case monitored results are above the specified limit.
- Maintain documentation of good environmental practices and applicable environmental laws for a ready reference.
- Maintain environmental related records.
- Coordination with regulatory agencies, external consultants, monitoring laboratories.
- Maintenance of log of public complaints and the action taken.

Hierarchical Structure of Environmental Management Cell

Normal activities of the EMP cell would be supervised by a dedicated person who will report to the site manager/coordinator of the Industrial Plotted Colony Project. The hierarchical structure of suggested Environmental Management Cell is given in following **Figure 8.**

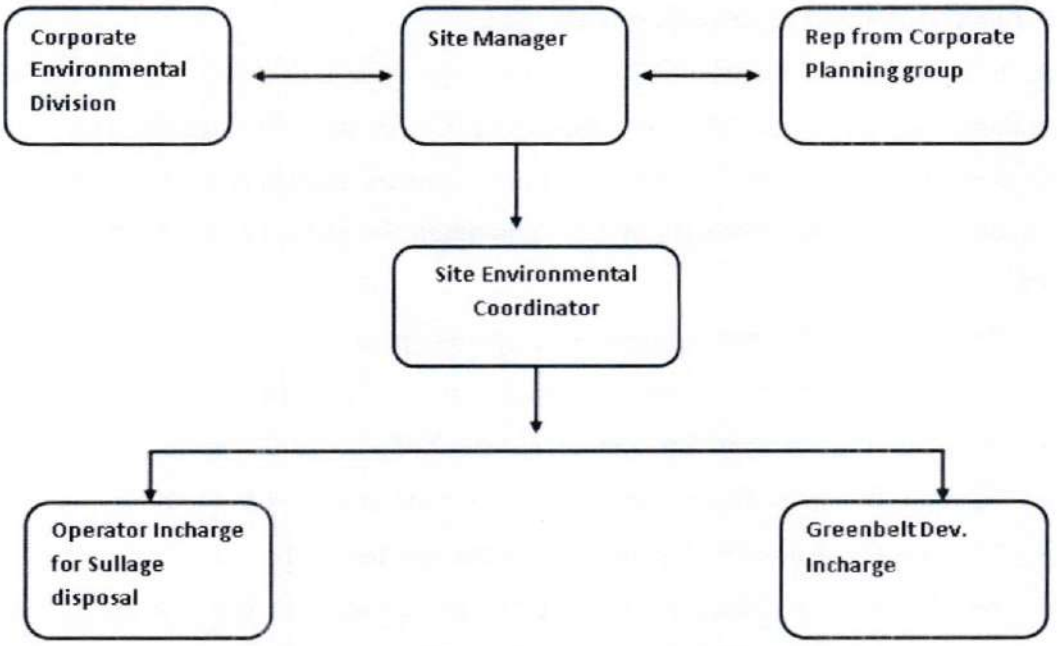


Figure 8: Environnent Management Cell Structure

10.3.2 ENVIRONMENTAL MONITORING

The purpose of environmental monitoring is to evaluate the effectiveness of implementation of Environmental Management Plan (EMP) by periodic monitoring. The important environmental parameters within the impact area are selected so that any adverse effects are detected and time action can be taken. The project proponent will monitor ambient air Quality, Ground Water Quality and Quantity, and Soil Quality in accordance with an approved monitoring schedule.

Table 9: Suggested Monitoring Program for Project

S. No.	Type	Locations	Parameters	Period and Frequency
1.	Ambient Air Quality	Project Site	Criteria Pollutants: SO_2, NO2, PM10, PM2.5, CO	Twice in a Year as per EIA Notification 2006.
2.	Groundwater (Portability	Project site	Drinking water parameters as per IS	Twice in a Year as per EIA Notification 2006

	testing)		10500.	
3.	Ambient Noise	Project site	dB (A) levels	Twice in a Year as per EIA Notification 2006
4.	Soil quality	Project site	Organic matter, C.H., N, Alkalinity, Acidity, heavy metals and trace metal, Alkalinity, Acidity.	Twice in a Year as per EIA Notification 2006
5.	Waste Characterization	Commercial	Physical and Chemical composition	Twice in a Year as per EIA Notification 2006

10.3.3 Awareness and Training

Training and human resource development is an important link to achieve sustainable operation of the facility and environment management. For successful functioning of the project, relevant EMP would be communicated to:

Contractors

Contractors must be made aware of the importance of waste segregation and disposal, water and energy conservation. The awareness can be provided by periodic Integrated Society meetings. They would be informed of their duties.

10.3.4 Environmental Audits and Corrective Action Plans

To assess whether the implemented EMP is adequate, periodic environmental audits will be conducted by the project proponent's Environmental division. These audits will be followed by Correction Action Plan (CAP) to correct various issues identified during the audits.

CONCEPTUAL PLAN

w.r.t.

INDUSTRIAL PLOTTED COLONY PROJECT

At

Village- Shidrawali, Tehsil- Manesar, District- Gurugram, Haryana

Project Proponent:

M/s Signatureglobal India Limited

Schedule: 8(b), Category: B1

Proposed Built-up Area = 6,36,042.498m²

Submission Period: December, 2024

QCI Certificate no. NABET/EIA/24-27/RA 0354

ENVIRONMENT CONSULTANT:

GRASS ROOTS RESEARCH & CREATION INDIA (P) LTD.

QCI Certificate no. NABET/EIA/2124/SA0211

(Accredited by QCI/NABET, Approved by MoEFCC, GoI, ISO 9001:2015 Certified Co.)

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GRC INDIA TRAINING & ANALYTICAL LABORATORY

(Accredited by NABL, Recognized by MoEF&CC, GoI)

A unit of GRC India

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CONCEPTUAL PLAN

INTRODUCTION

The Industrial Plotted Colony Project is to be developed by M/s Signatureglobal India Limited. The project site is located at Village- Shidrawali, Tehsil Manesar, District-Gurugram, Haryana on a land measuring 135.7250 acres.

The company has vast experience in planning and construction of Industrial Parks. We will propose Category B industries. The project facilities include:

- Industrial Plotted Development
- Residential Plotted Development
- Community facilities
- Commercial Plots

SITE LOCATION AND SURROUNDINGS

The project site is located at Village-Shidrawali, Tehsil Manesar, Gurugram, Haryana. The Geographical coordinates of the project are 28° 14' 46.93' N and 76° 49' 29.40' E.

CONNECTIVITY

The Nearest Highway is NH-48 which is adjacent to the 8.7 km site in North west direction, SH-28 is 0.58 km towards SW direction, SH-25 which is 4.1 km (S), NH-919 is 3.8 km towards S direction, Western Peripheral Expressway is 8.7 km towards NE direction, MDR 132 is 5.1km towards NE direction, & NH-352W which is 9.8 km (S) direction away from project site.

The nearest railway station being Inchhapuri Railway Station is about 12.6 km (NW) away from the project site.

The nearest Airport is Indira Gandhi International Airport 40 km (NE) from the project site.

PROJECT COST

The Total Cost of the proposed project will be INR 1593.7 Crore including the land and development cost.

LANDFORM, LANDUSE AND OWNERSHIP DETAILS

Total land is 135.7250 acres, and the Land has been allotted by Directorate of Town and Country Planning, Haryana to M/s Signatureglobal (India Limited to set-up Industrial Park.

The land use break-up of site is provided below in Table 1.

Table 1: Land use break-up of Site

S. No	Description	Area (acre)	Area (m^2)	Percentage of Net planned area (%)
1	Area under Industrial Plots	45.537	1,84,280.882	33.55
2	Area under DDJAY Residential Component	31.490	1,27,433.845	23.02
3	Area under Commercial Plots	1.903	7701.339	1.402
4	Area under Road/Road widening/Open/Green /Public Facilities etc	56.795	2,29,842.913	41.84
	Total land area	135.7250	**5,49,258.716**	**100**

AREA STATEMENT

The total area of the site is **5,49,258.716** m^2 (135.7250 acre). The detailed area statement is provided below in Table 2:

Table 2: Detailed Area Statement

S. No.	Particulars	Area (in m^2)
1.	**Total Licensed area**	**5,49,258.716**
2	Area under Road (Delhi –Jaipur Road) Widening	10,194.015
3	Area under proposed Green Belt of Delhi –Jaipur Road (considering 60 m wide on either side)	13677.139
4	Area under green belts of RRTS (considering 20m on either side)	5293.280
5.	Total area to be deducted (2+3+4)	29,164.434
6.	**Balance area (1-5)**	**5,20,094.282**
7.	**50% benefit of area under road** (Delhi –Jaipur Road) Widening, Green Belt of Delhi –Jaipur Road & green belts of	**11,935.577**

	RRTS	
8.	**Net Area (6+7)**	**5,32,029.859**
9.	Area under undetermined use	5,516.641
10.	**Net Planned area (8-9)**	**5,26,513.219**
11.	**Proposed Area under plots**	**319,416.066**
	• Area under Industrial Plots	1,84,280.882
	• Area under Residential plots	1,27,433.845
	• Area under Commercial plots	7701.339
12.	**Total Permissible FAR**	**5,78,220.453**
	• Industrial Permissible FAR (1.250)	2,30,351.102
	• Commercial Permissible FAR (4.2857/Plot)	11,417
	• Residential Permissible FAR (2.64)	3,36,452.351
13.	**Total Proposed FAR**	**5,78,220.453**
	• Industrial FAR	2,30,351.102
	• Commercial FAR	11,417
	• Residential FAR	3,36,452.351
14.	NON-FAR Area	**57,822.045**
15.	**Total Built up area**	**6,36,042.498**
16.	**Green Area (20% of Plot area)**	**1,05,302.64**

POPULATION DENSITY

The total population of the project will be 61,489 persons. The detailed population break-up is given in Table 3:

Table 3(a): Population Break-up for Residential Population

S. No.	Description	Total no. of floors per plot	DUs/FAR (sqm)	PPU	Total Population
A.	**Residential plots (Type 1)**				
1.	Residential plots	4	285	18	5130
2.	Visitor's	10% of Residential population			513
3.	Staff (Operation & Maintenance)				200
B.	**Residential plots (Type 2)**				

4.	Residential plot Population	4	677	18	12186
5.	Visitor's	10% of Residential population			1219
6.	Staff (Operation & Maintenance)				200
	Grand Total of Residential Population				**19,448**

Table 3(b): Population Break-up for Community buildings, Commercial & Population

S. No.	Description	Area (m^2)	PPU/ Person/m^2 FAR	Total Population
C.	**Community Building -1**			
7.	**Community Building Population**	9351.919	1.4	**6680**
8.	**Staff**	10% of Community Building 1 population		668
9.	**Visitors**	90% of Community Building 1 population		6012
D.	**Community Building -2**			
10.	**Community Building Population**	10290.508	1.4	**7351**
11.	**Staff**	10% of Community Building 2 population		736
12.	**Visitors**	90% of Community Building 2 population		6615
	Total Community buildings population			**14,031**
E.	**Commercial Building**			
13.	**Retail Shops (Ground Floor)**	4,566.8	(@ 1 Person/3 m^2)	**1522**
	• Staff	(@10% of the Retail shop population)		152
	• Visitors	(@90% of the Retail shop population)		1370
14.	**Retail Shops (Above Floors)**	6,850.2	(@ 1 Person/6m^2)	**1142**
	• Staff	(@10% of the Retail shop		114

		population)	
	• Visitors	(@90% of the Retail shop population)	1028
	Total Commercial building population		**2664**
	Grand total of Community buildings & Commercial buildings population		**16,695**

Table 3(c): Population Break-up for Industrial Population

S. No.	Description	Area (m^2)	PPU/ Person/m^2 FAR	Total Population
F.	**Industrial Plots**			
	Industrial plots population	2,30,351.102	(@ 1 Person/10 m^2)	23,035
	Visitors	10% of Industrial plots population		2303
	Total Industrial plots population			**25,338**

WATER REQUIREMENT & SUPPLY SYSTEM

During the Construction Phase the Source of water will be Ground water. During operation phase, the source of water supply will be GMDA. The total water requirement for the project will be approx. 3,221 KLD.

The domestic water demand for Residential (Type 1 & 2), Community Buildings, Commercial Buildings, & industrial Plots is 2905 KLD. The freshwater requirement for Residential (Type1 &2), Community Buildings, Commercial Buildings, & industrial Plots will be 1943 KLD. However, one-time freshwater demand for the project will be 3,221 KLD.

The calculation of daily water requirement and wastewater is given below in Table 4 to 7 respectively.

Table 4: Calculations for Daily Water Demand

S. No.	Description	Occupancy	Rate of water demand (lpcd)		Total Water Requirement (KLD)		
			Fresh	Flushing	Fresh	Flushing	Total
A.	**Domestic Water for Residential plots (Type 1)**						
	Residential plots	5130	@ 65 lpcd	@ 21 lpcd	333	108	441
	• Staff	200	@25 lpcd	@20 lpcd	5	4	9

	• Visitors	513	@ 10 lpcd	@5 lpcd	5	3	8
					343 KLD	**115 KLD**	**458 KLD**
	Total Domestic Water= 458 KLD						
B.	**Domestic Water for Residential plots (Type 2), Community buildings, & Commercial buildings**						
	Residential plots (Type 2)	12186	@ 65 lpcd	@ 21 lpcd	792	256	1048
	• Staff (for Community buildings, Operation & Maintenance for residential plots (type 2) & Commercial building)	1870	@25 lpcd	@20 lpcd	47	37	84
	• Visitors (for Community buildings, Residential Plots, & Commercial building)	16,244	@ 10 lpcd	@5 lpcd	162	81	243
					1001 KLD	**374 KLD**	**1375 KLD**
Total Domestic Water for Residential plots (Type 2), Community buildings & Commercial Buildings = 1375 KLD							
C.	**Domestic Water for Industrial plots**						
	• Industrial Plots	23,035	@25 lpcd	@20 lpcd	576	461	1037
	• Visitors (for Industrial plots)	2303	@ 10 lpcd	@5 lpcd	23	12	35
					599 KLD	**473 KLD**	**1072 KLD**
	Total Domestic Water for Industrial plots						**1072 KLD**
D.	**Horticulture**	1,05,302.64	3 l/sqm		316 KLD		

Grand Total (A+B +C+D)=3,221 KLD

Table 5: Wastewater Calculation for Residential plots (Type 1)

Domestic Water	**458 KLD**
• Fresh water	343 KLD
• Flushing water	115 KLD
Waste water [@80% fresh + 100% flushing]	274.4 +115 = **389 KLD**
STP Capacity	500 KLD

Table 6: Wastewater Calculation for Residential plots (Type 2), Community buildings, & Commercial buildings

Domestic Water	**1375 KLD**
• Fresh water	1001 KLD
• Flushing water	374 KLD
Waste water [@80% fresh + 100% flushing]	801 + 374= **1175 KLD**
STP Capacity	1410 KLD

Table 7: Wastewater Calculation for Industrial plots

Domestic Water	**1072 KLD**
• Fresh water	599 KLD
• Flushing water	473 KLD
Waste water [@80% fresh + 100% flushing]	479 + 473= **952 KLD**
STP Capacity	1150 KLD

WASTE WATER & TREATEMENT

Approx. 2516 KLD wastewater will be generated from the **Residential plots (Type 1 & 2), Community buildings, Commercial buildings & Industrial plots**. Wastewater will be treated in an in-house STP of total capacity 3060 KLD (500 KLD +1410 KLD +1150 KLD).

STP 1 [For Residential plots (Type 1)]: 500KLD

STP 2 [For Residential plots (Type 2), Community buildings, & Commercial buildings]: 1410 KLD

STP 3 [For Industrial plot]:1150 KLD

Treated wastewater will be used for flushing and horticulture and remaining water will discharge to External sewer.

Water balance diagram for summer, monsoon & winter season is presented below:

SEWAGE TREATMENT PLANT

MBBR TECHNOLOGY

An external sewage network shall collect the sewage from all units, and flow by gravity to the sewage treatment plant.

Following are the benefits of providing the Sewage Treatment Plant in the present circumstances:

- The process has long retention time and can absorb shock load situation.
- Reduced net daily water requirements, source for Flushing and Horticultural purposes by utilization of the treated waste water.
- Reduced dependence on the public utilities for water supply and sewerage systems.
- The process produces a well-oxidized sludge in small quantities only, which can be removed and used as manure.

a. Wastewater Details

(a)	Daily load	:	2516 KLD
(b)	Duration of flow to STP	:	24 hours
(c)	Temperature	:	Maximum 32°C
(d)	pH	:	6.5-8.5
(e)	Colour	:	Mild
(f)	T.S.S. (mg/l)	:	250-400 mg/l
(g)	BOD_5 (mg/l)	:	300-400 mg/l
(h)	COD (mg/l)	:	600-700 mg/l

b. Treated effluent

(a)	pH	:	6.0 to 8.5
(b)	B.O.D.	:	<10 mg/l
(c)	C.O.D.	:	<30 mg/l
(d)	Total Suspended Solids	:	<20mg/l

c. Treatment Technology

MBBR TECHNOLOGY

Moving bed biofilm reactor technology is based on the principle of attached growth process. Raw sewage will be collected under gravity into the equalization tank after allowing to pass through the bar screen. Screens will be provided in screen chambers and it will be manually cleaned by going down to a platform. The bar screen, by removing coarse solids from the sewage help in protecting the raw sewage pump.

Fully submersible centrifugal non clog sewage handling pump will be provided in the collection cum equalization tank to pump the collected waste water to the next MBBR tanks. Automatic level controller will be provided in the tank to turn the pump off at the low water level in the tank and to start the pump when water level is high automatically. Air will be introduced in this tank to prevent any potential foul smell problem & to provide the mixing of wastewater to avoid the sedimentation of solids in this tank. Air Grid used for aeration purpose shall be non-clog.

The sewage collected in equalization tank is pumped the moving bed bioreactor. There shall be two nos. of bioreactors in series for the efficient working and removal of BODs for the required retention time. The process inside the moving bed bioreactors consists of adding small cylindrical-shaped polyethylene/polypropylene carrier elements in aerated basins to support biofilm growth. The small cylinders are provided with a cross inside the cylinder and longitudinal fins on the outside. The biofilm carriers are maintained in the reactor by the use of a perforated plate with appropriate slot at the tank outlet. Air agitation or mixers are applied in a manner to continuously circulate the packing. The packing may fill 25 to 50 percent of the tank volume. Specific surface area of the packing is about 450-500m^2/m^3 of bulk packing volume. The waste water from first bioreactor flows by gravity through the perforated plate/mesh to the next bioreactor kept in series. Inside the bioreactors, aerobic bacteria grow in an attached growth from around the moving plastic media inside the reactors. The bacteria have to reduce BOD & COD of waste water in the presence of oxygen provided through the air

RAINWATER HARVESTING

The storm water collection system for the premises shall be self-sufficient to avoid any collection/stagnation and flooding of water. The amount of storm water run-off depends upon many factors such as intensity and duration of precipitation, characteristics of the tributary area and the time required for such flow to reach the drains. The drains shall be located near the carriageway along either side of the roads. Taking advantage of road camber, the rainfall run off from roads shall flow towards the drains. Storm water from various plots/shall be connected to adjacent drain by a pipe through catch basins. Therefore, it has been calculated to provide 65 rainwater harvesting pits at selected locations, which will catch the maximum run-off from the site.

1) Since the existing topography is congenial to surface disposal, a network of storm water pipe drains is planned adjacent to roads. All building roof water will be brought down through rainwater pipes.
2) Proposed storm water system consists of pipe drain, catch basins and seepage pits at regular intervals for rainwater harvesting and ground water recharging.
3) The peak hourly rainfall of 45 mm/hr shall be considered for designing the storm water drainage system.

Rainwater harvesting has been catered to and designed as per the guideline of CGWA. Peak hourly rainfall has been considered as 45 mm/hr. The recharge pit of 2.5m diameter and 4 m depth is constructed for recharging the water. Inside the recharge pit, a recharge bore is constructed having adequate diameter and depth. The bottom of the recharge structure will be kept 5 m above this level. At the bottom of the recharge well, a filter media is provided to avoid choking of the recharge bore. Design specifications of the rainwater harvesting plan are as follows:

- Catchments/roofs would be accessible for regular cleaning.
- The roof will have a smooth, hard and dense surface which is less likely to be damaged allowing the release of material into the water. Roof painting has been avoided since most paints contain toxic substances and may peel off.
- All gutter ends will be fitted with a wire mesh screen and a first flush device would be installed. Most of the debris carried by the water from the rooftop like leaves, plastic bags and paper pieces will get arrested by the mesh at the terrace outlet and to prevent contamination by ensuring that the runoff from the first 20 minutes of rainfall is flushed off.
- No sewage or wastewater would be admitted into the system.
- No wastewater from areas likely to have oil, grease, or other pollutants has been connected to the system.

Calculations for storm water load:

Green Area = 37,241.664m^2

Paved Area = 1,69,855.489m^2
Mean monthly rainfall for District as per IMD = 45 mm
Run-off from Green area = 105302.64 x 0.045 x 0.20
= 947.72 m^3
Run-off from Paved area = 1, 69,855.489 x 0.045 x 0.70
= 5,350.447m^3
Total runoff load from green and paved area = 947.72 + 5,350.447= **6,298.167 m^3**
Taking 20 minutes Retention Time, Total volume of storm water = 6,298.167/3
= 2,099.389 m^3
Taking the effective diameter and depth of a Recharge pit 2.5m and 4 m respectively,
Volume of a single Recharge pit = $\pi r^2 h$ = 3.14 × 1.6× 1.6× 4= 32 m^3
Hence No. of pits required = 2,099.389/32 = 65 pits
A total of 65 no. of pits proposed for artificial ground water recharge.

PARKING FACILITIES

Adequate provision will be made for car/vehicle parking at the project site. There shall also be adequate parking provisions for visitors so as not to disturb the traffic and allow smooth movement at the site.
For plotted development the parking shall be within the plots by the individual plot owners.

POWER REQUIREMENT

The power shall be supplied by the State Electricity Board. The maximum load demand for the project will be approx. 12,883 KW.

Details of D.G Sets
There is provision of 2no. of DG set of total capacity 1100kVA for Commercial Facility which includes 1 x 750kVA +1x 350 kVA and 2no. of DG set of total capacity 1750 kVA for Common Services which includes 1 x 750kVA +1x 1000 kVA are proposed for power back up. The DG sets will be equipped with acoustic enclosure to minimize noise generation and adequate stack height for proper dispersion.

SOLID WASTE GENERATION

Solid waste would be generated both during the construction as well as operation phase. The solid waste expected to be generated during the construction phase will comprise of

2.	**Domestic Solid Waste for Industrial plots**			
	• Industrial Plots	23035	0.25	5759
3.	Staff (Residential Maintenance, Community, Commercial, & Industrial)	2070	0.25	518
4.	Visitors(Residential, Community, Commercial, & Industrial)	19060	0.15	2,859
5.	Horticultural Waste (26 acres)	@ 0.2 kg/acre/day		5.2
6.	STP Sludge	Sludge generated x 0.35 x B.O.D difference/1000		343.434
Total Solid Waste Generation = 18,143 kg/day				

Following arrangements will be made at the site in accordance to Solid Waste Management Rules, 2016:

❖ **Collection and Segregation of waste**

1. Door to door collection system will be provided for collection of domestic waste.
2. Separate colored bins will be provided for Dry recyclable and Bio-Degradable waste.
3. Local vendor will be hired for collection and disposal of waste.
4. Litter bin will also be provided in open areas like parks etc.

❖ **Treatment of waste**

- Bio-Degradable waste

1. Bio-degradable waste will be subjected to composting by organic waste converter and the compost will be used as manure.
2. STP sludge is proposed to be used for horticultural purposes as manure.
3. Horticultural Waste is proposed to be composted and will be used for gardening purposes.

- Recyclable waste

i. Grass Recycling – The cropped grass will be spread on the green area. It will act as manure after decomposition.

ii. Recyclable waste like paper, plastic, metals etc. will be sold off to recyclers.

❖ **Disposal**

Recyclable and non-recyclable waste will be disposed of through a local agency. Solid waste management scheme is depicted in the following figure:

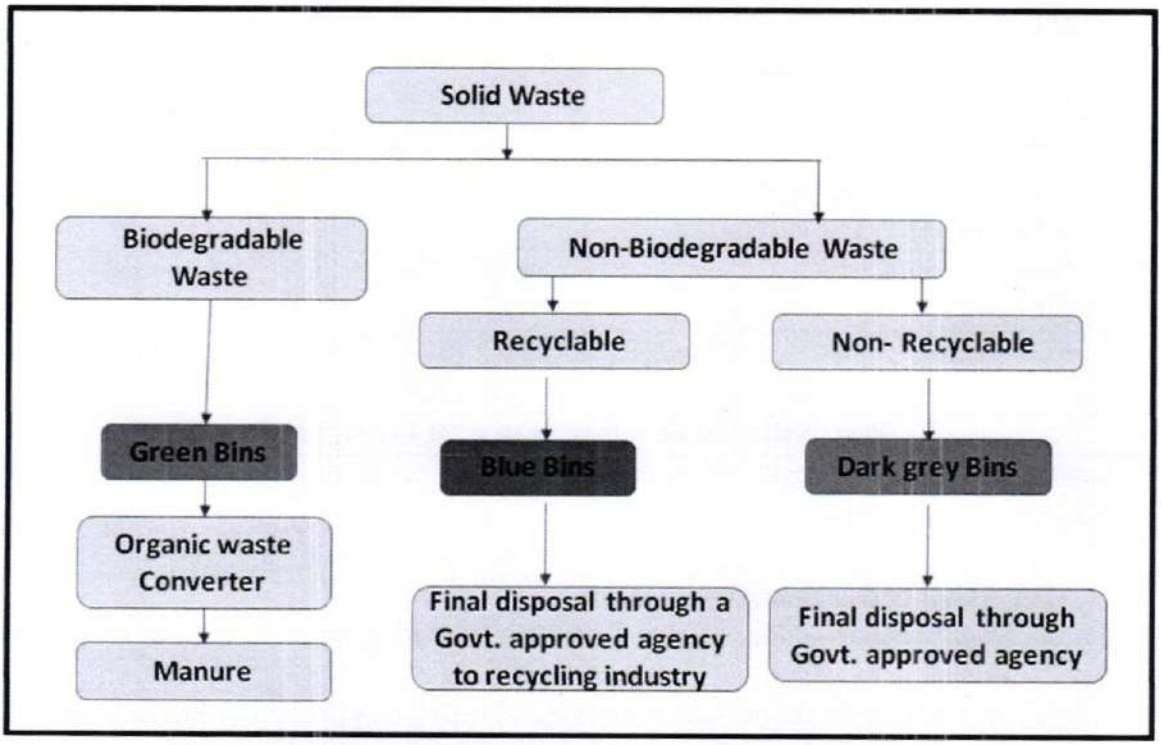


Fig. 8: Solid Waste Management Scheme (Operation Phase)

Organic Waste Converter

A waste converter is a machine used for the treatment and recycling of solid and liquid refuse material. A converter is a self-contained system capable of performing the following functions: pasteurization of organic waste; sterilization of pathogenic or biohazard waste; grinding and pulverization of refuse into unrecognizable output; trash compaction; dehydration.

Benefits of organic waste converter:

1. Large quantity of solid waste is converted to manure in a very short period
2. Manure can be used as compost for gardening
3. Machine requires less space, and the efficiency is high
4. Manpower and maintenance are very less
5. This is one of the latest techniques of managing biodegradable solid waste.

Organic Waste Converter - 300 (Dim. 3m × 4m) 2 machines are proposed to be used for composting waste 120kg/batch or 3000 kg/day & it requires electricity of about 13.5 HP.
No. of batches /day = 3000/120 = 25

Biodegradable Waste to be converted = 40% of total solid waste generated = 7256 kg/ day
Taking 20% higher = 8707kg
No. of batches to convert 8707 kg = 8707 /120 = 73

Operation Cost-monthly per capita:

The operating cost of OWC - 300 = 1, 80,000 INR/month
Cost/day = 1, 80,000/30
= 6000/-
1 batch/day cost = 6000/25
= 240 INR
Cost for 73 batch/day = 73 × 240/-
= 17520 /-
Monthly operating cost = 30 ×17520
= INR 5, 25,600 /- per month

GREEN AREA

Total green area measures **1,05,302.64** m^2 which will include green belt, Avenue plantation and lawn.
Evergreen tall and ornamental trees have been proposed to be planted inside the premises.
No. of trees required = 1 tree/80 sq.m. of plot area =5,49,258.716/80 = 6866 Nos
No. of trees proposed to be planted = 6,870 trees.

As per OM dated 24.07.2024 we will plant one additional tree "EK Ped Maa Ke Naam."

ENVIRONMENT MANAGEMENT PLAN

The total cost (Land Cost + Development Cost) of the proposed project will be INR 1593.7 Crores. The capital cost for environmental management of the proposed project is estimated to be INR 797 lakhs (Construction and operation). INR 189.5 lakhs (operation and construction) per year will be required as annual recurring expenses to meet the recurring expenditure for implementing the measures.

Table 9 ENVIRONMENT MANAGEMENT PLAN BUDGET

COMPONENT	Capital Cost (INR Lakh)	Recurring Cost (INR Lakh/Yr)

Labor Sanitation & Wastewater Management	15	3.75
Dust Mitigation Measures Including site barricading, water sprinkling & anti-smog gun)	15	3.75
Storm Water Management (temporary drains & sedimentation basin)	10	2.5
Solid Waste Management	5	1.25
TOTAL	**45**	**11.25**

COMPONENT	Capital Cost (INR Lakh)	Recurring Cost (INR Lakh/Yr)
Sewage Treatment Plant	320	80
Rain Water Harvesting System	140	35
Solid Waste Management	105	26.25
Environmental Monitoring	0	9
Green Area/ Landscape Area	102	25.5
Others (Energy saving System, miscellaneous)	10	2.5
Sub-Total	**677**	**178.25**
CER		
Govt. Sr. Sec. School, Sidhrawali Complete makeover Construction of toilets Installation of Solar Panels Painting of School Building Replacement of doors and windows Energy efficient lighting Smart Classroom equipment	50	--
Aravali Safari and Aravali Green Wall Funds	**25**	--
Total	**752**	**178.25**

TOTAL EMP BUDGET		
COMPONENT	**CAPITAL COST (INR LAKH)**	**RECURRING COST (INR LAKH/YR)**
During Construction Phase	45	11.25
During Operation Phase	752	178.25

TOTAL	**797**	**189.5**

----------X----------

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Annexure-VI(b)

SIGNATURE GLOBAL
REALTY. RELIABILITY. RESPONSIBILITY.
AN ISO 9001:2015; 14001:2015; 45001:2018; 27001:2022 CERTIFIED COMPANY

Date: 12.09.2024

To,
The Member Secretary,
State Level Expert Appraisal Committee (SEAC),
Bays No. 55-58, Sector-2,
Panchkula, Haryana

Sub: Regarding Environment Clearance for Industrial Plotted Colony Project at Village – Shidrawali, Tehsil –Manesar, District -Gurugram Haryana by M/s Signatureglobal India Limited.

Dear Sir,

This is in reference with the above mentioned subject, it is kindly intimated that we had applied an application for Terms of Reference to SEAC, Haryana on 10/09/2024 (Proposal No. SIA/HR/INFRA2/494250/2024).

Then, SEAC, Haryana awarded the standard TOR Letter vide letter no. TO24B3813HR5427969N dated 10/09/2024. We have already generated baseline data considering monitoring period of winter season from December 2023 to February 2024 for the preparation of Final EIA/EMP report.

As per the guidelines of MOEFCC vide (S.O 1533 E) dated 14.09.2006 & its amendment till date "All projects and activities listed as category "B" in item 8 of the Schedule (Construction or Township or Commercial Complexes or Housing)" shall require Environmental Clearance from State level.

Hence, we are herewith submitting EIA/EMP report as per the latest guidelines and Notification along with compliance to the Standard Terms of Reference issued by SEAC, Haryana for your kind perusal.

Kindly consider the case and award the Environmental Clearance at your earliest.

Thanking you,

Yours truly,

For M/s Signatureglobal India Limited

Name: Vineet Kumar
Designation: **Authorized Signatory**
Encl: As stated

Environment Impact Assessment & Environment Management Plan Report

w.r.t.

INDUSTRIAL PLOTTED COLONY PROJECT

At

Village- Shidrawali, Tehsil-Manesar, District- Gurugram, Haryana

Schedule: 8(b), Category: B1
Sector-39 as per QCI/NABET Scheme
Built-up area = 7,24,895.645m²
(Study Period – Dec. 2023 to Feb. 2024)
(Submission Period – September 2024)

Project Proponent:

M/s Signatureglobal India Limited

Environment Consultant:

GRASS ROOTS RESEARCH & CREATION INDIA (P) LTD

QCI Certificate no. NABET/EIA/21-24/SA 0211

Validity Extension letter no. QCI/NABET/ENV/ACO/24/3338

Valid till-11th Nov, 2024
F-374 & 375, Sector-63, Noida, U.P.
Ph.: 0120- 4044630, Telefax: 0120- 2406519
Email: info@grc-india.com
Website: http://www.grc-india.com

GRC INDIA TRAINING & ANALYTICAL LABORATORY
(NABL ACCREDITED & MoEFCC NO. S.O. 388 (E))
A unit of GRC India

Signatureglobal (India) Ltd.

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Annexure no.	Description
1	Standard ToR letter
2	LICENSE
3	Lab report
4	NABL certificate
5	Conservation plan

Annexure – VII

Declaration by Experts contributing to the EIA report of Industrial Park Project at Village-Shidrawali, District- Gurugram, Haryana by M/s Signature Global (India) Limited. (Category - B Project as Per EIA Notification 2006)

I, hereby, certify that I was a part of the EIA team in the following capacity that developed the above EIA.

EIA coordinator: Mr. Sonu

Signature and Date:

Period of involvement: December 2023 to till date

Functional area experts:

S. No.	Functional areas	Name of the expert/s	Involvement (period and task**)	Signature and date
1	AP*	Ms. Monika Gupta	December 2023 to February 2024	
2	WP*	Mr. Sonu	December 2023 to February 2024	
3	SHW*	Dr. Dhiraj Kr Singh	December 2023 to February 2024	
4	SE*	Mr. Rajiv Rastogi	December 2023 to February 2024	
5	EB*	Dr. Ashok Kr Rathoure	December 2023 to February 2024	
6	HG*	Prof. Tapan Majumder	December 2023 to February 2024	
7	GEO*	Prof. Tapan Majumder	December 2023 to February 2024	
8	SC*	Mr. N P S Varde	December 2023 to February 2024	
9	AQ*	Mr. Sonu	December 2023 to February 2024	
10	NV*	Mr. K.D. Choudhury	December 2023 to February 2024	
11	LU*	Mr. N. P. S. Varde	December 2023 to February 2024	
12	RH*	Mr. K.D. Choudhury	December 2023 to February 2024	

*One TM against each FAE may be shown

13.	EB* (Category B Expert)	Ms. Kavita Chopra	December 2023 to February 2024 (Assisting in EB report preparation)	
14.	Team Member: AP	Ms. Kavita Chopra	December 2023 to February 2024 (Assisting in Air pollution under approved Expert Ms. Monika Gupta)	

*One TM against each FAE may be shown
**Please attach additional sheet if required

Declaration by the Head of the accredited consultant organization/ authorized person

I, Dr. Dhiraj Kr. Singh hereby, confirm that the above-mentioned experts prepared the EIA of Industrial Park Project at Village- Shidrawali, District- Gurugram, Haryana by M/s Signature Global (India) Limited.

I also confirm that EIA Coordinator (EC) has gone through the report, and the consultant organization shall be fully accountable for any misleading information.

It is certified that no unethical practices, plagiarism involved in carrying out the work and external data / text has not been used without proper acknowledgement while preparing this EIA report.

Signature:

Name: **Dr. Dhiraj Kr. Singh**

Designation: **Managing Director**

Name of the EIA consultant organization: **Grass Roots Research & Creation India (P) Ltd**

NABET Certificate No. & Issue Date: **NABET/EIA/2124/SA 0211 dated: - 18.12.2023 and valid till:- 15.08.2024**

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Name of Accredited Organization:	M/s GRC India Pvt. Ltd, Noida
Name of EIA Coordinator:	Mr. Sonu
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Name : Dr. Dhiraj Kr. Singh (MD)

Signature :

Name of the EIA Consultant Organization: M/s GRC India Pvt. Ltd, Noida, 201301

NABET Certificate no. & Issue date: NABET/EIA/21-24/SA 0211 dated Aug 12, 2024 valid till Nov 11, 2024.
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सत्यमेव जयते

File No.: SEAC/HR/2024/190
Government of India
Ministry of Environment, Forest and Climate Change
(Issued by the State Level Expert Appraisal Committee(SEAC), HARYANA)
***

Dated **10/09/2024**

To,

M/s Sungold Height and Developers LLP in Collaboration with M/s SIGNATUREGLOBAL INDIA LIMITED
13th Floor, Dr. Global Das Bhawan, 28 Barakhamba Road , 28 Barakhamba Road, Connaught Place, New Delhi, GURUGRAM, HARYANA, 110001
vineet.signatureglobal@gmail.com

Subject: Standard Terms of Reference (ToR) to the proposed Industrial Plotted Colony at Village Shidrawali, Tehsil Manesar District Gurugram, Haryana Project under the EIA Notification 2006-and as amended thereof-regarding.

Sir/Madam,

This is in reference to your application submitted to SEAC vide proposal number SIA/HR/INFRA2/494250/2024 dated 10/09/2024 for grant of Terms of Reference (ToR) to the project under the provision of the EIA Notification 2006-and as amended thereof.

2. The particulars of the proposal are as below :

(i) ToR Identification No.	TO24B3813HR5427969N
(ii) File No.	SEAC/HR/2024/190
(iii) Clearance Type	Fresh ToR
(iv) Category	B1
(v) Project/Activity Included Schedule No.	8(b) Townships/ Area Development Projects / Rehabilitation Centres,8(b) Townships/ Area Development Projects / Rehabilitation Centres
(vii) Name of Project	Industrial Plotted Colony at Village Shidrawali, Tehsil-Manesar, District-Gurugram, Haryana by M/s Signatureglobal India Limited
(viii) Name of Company/Organization	SIGNATUREGLOBAL INDIA LIMITED
(ix) Location of Project (District, State)	GURUGRAM, HARYANA
(x) Issuing Authority	SEAC
(xii) Applicability of General Conditions	NO

3. The **SEAC** has examined the proposal in accordance with the Environment Impact Assessment (EIA) Notification, 2006 & further amendments thereto and after detailed examination hereby decided to grant Standard Terms of Reference to the instant proposal of **M/s. SIGNATUREGLOBAL INDIA LIMITED** under the provisions of the aforementioned Notification.

4. The brief about products and by products as submitted by the Project proponent in Form-1 (Part A, B) and Standard Terms of Reference are annexed to this letter as Annexure (1).

5. The Ministry reserves the right to stipulate additional TORs, if found necessary.

6. The Standard Terms of Reference (ToR) to the aforementioned project is under provisions of EIA Notification, 2006 and as amended thereof. It does not tantamount to approvals/consent/permissions etc required to be obtained under any other Act/Rule/regulation. The Project Proponent is under obligation to obtain approvals /clearances under any other Acts/ Regulations or Statutes, as applicable, to the project.

7. The granted letter, all the documents submitted as a part of application viz. Form-1 Part A and Part B are available on PARIVESH portal which can be accessed by scanning the QR Code above.

Copy To

vineet.signatureglobal@gmail.com
scy.seachr@gmail.com

Annexure 1

Standard Terms of Reference for conducting Environment Impact Assessment Study for Townships/ Area Development Projects / Rehabilitation Centres and information to be included in EIA/EMP report

1. Project Details

Sr. No.	Terms of Reference
1.1	Need and benefits of the project.
1.2	Submit data for built-up area for each building, the use and occupancy classification in line with NBC 2016 also to be indicated [for differential functional requirements].
1.3	The cost of the Project (capital cost and recurring cost) as well as the cost towards implementation of EMP should be clearly spelt out.

2. Land Environment

Sr. No.	Terms of Reference
2.1	Examine details of land use as per Master Plan and land use around 10 km radius of the project site. Analysis should be made based on latest satellite imagery for land use with raw images. Check on flood plain of any river.

3. Land acquisition and R&R

Sr. No.	Terms of Reference
3.1	Submit details of environmentally sensitive places, land acquisition status, rehabilitation of communities/villages and present status of such activities.

4. Environmental Monitoring and Management

Sr. No.	Terms of Reference
4.1	Examine baseline environmental quality along with projected incremental load due to the project.
4.2	Environmental data to be considered in relation to the project development would be (a) land, (b) groundwater, (c) surface water, (d) air, (e) bio-diversity, (f) noise and vibrations, (g) socio economic and health.
4.3	Submit Roles and responsibility of the developer etc for compliance of environmental regulations under the provisions of EP Act.
4.4	Examine separately the details for construction and operation phases both for Environmental Management Plan and Environmental Monitoring Plan with cost and parameters.
4.5	Possible carbon footprint contribution from each activities and mitigation measures proposed shall be included as part of Environment Management Plan.

5. Drainage

Sr. No.	Terms of Reference
5.1	Submit a copy of the contour plan with slopes, drainage pattern of the site and surrounding area. Any obstruction of the same by the project.

6. Forest

Sr. No.	Terms of Reference
6.1	Submit the details of the trees to be felled for the project, if any .
6.2	Submit the present land use and permission required for any conversion such as forest, agriculture etc.

7. Water Environment

Sr. No.	Terms of Reference
7.1	Ground water classification as per the Central Ground Water Authority.

8. Water Management

Sr. No.	Terms of Reference
8.1	Examine the details of Source of water, water requirement, use of treated waste water and prepare a water

Sr. No.	Terms of Reference
	balance chart.
8.2	Rain water harvesting proposals should be made with due safeguards for ground water quality.
8.3	Maximize recycling of water and utilization of rain water. Examine details.
8.4	Examine soil characteristics and depth of ground water table for rainwater harvesting
8.5	Permission from CGWA for abstraction of groundwater, if any, including dewatering during basement excavation.

9. Waste Management

Sr. No.	Terms of Reference
9.1	Examine details of solid waste generation treatment and its disposal.
9.2	Construction & Demolition Waste Management Plan shall be prepared as part of EMP providing details of demolition activities involved along with quantification and disposal mechanism.

10. Energy Requirements

Sr. No.	Terms of Reference
10.1	A certificate of adequacy of available power from the agency supplying power to the project along with the load allowed for the project.
10.2	Examine and submit details of use of solar energy and alternative source of energy to reduce the fossil energy consumption. Energy conservation and energy efficiency.
10.3	DG sets are likely to be used during construction and operational phase of the project. Emissions from DG sets must be taken into consideration while estimating the impacts on air environment.

11. Road and Traffic

Sr. No.	Terms of Reference
11.1	Examine road/rail connectivity to the project site and impact on the traffic due to the proposed project. Present and future traffic and transport facilities for the region should be analysed with measures for preventing traffic congestion and providing faster trouble free system to reach different destinations in the city.
11.2	A detailed traffic and transportation study should be made for existing and projected passenger and cargo traffic.
11.3	Examine the details of transport of materials for construction which should include source and availability.

12. Disaster Management Plan

Sr. No.	Terms of Reference
12.1	Submit details of a comprehensive Disaster Management Plan including emergency evacuation during natural and man-made disaster. This should cover details of vulnerabilities due to natural and manmade hazards (earthquake, flooding, cyclone, landslides, fire etc.) and details of disaster mitigation efforts for buildings and infrastructure through structural sufficiency and Fire and Life Safety compliance in line with National Building Code NBC, 2016.

13. Court Cases

Sr. No.	Terms of Reference
13.1	Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the Project should be given.

14. Miscellaneous

Sr. No.	Terms of Reference
14.1	Any further clarification on carrying out the above studies including anticipated impacts due to the project and mitigative measure, project proponent can refer to the model ToR available on Ministry website http://moef.nic.in/Manual/Townships.

Additional Terms of Reference

N/A

Annexure 2

Details of Products & By-products

Name of the product /By-product	Product / By-product	Quantity	Unit	Mode of Transport / Transmission	Remarks (eg. CAS number)
Built up area	By-Product	72.48	Hectares (Ha)	Road	---

Signatureglobal (India) Ltd

File No. TO24B3813HR5427969N dated 10.09.2024.

POINT-WISE COMPLIANCE OF TERMS OF REFERENCE CONDITIONS

S. No	Standard ToR Points	ToR Compliance	Reference
1.	**Project Details**		
1.1	Need and benefits of the project.	**Need of the project:** The project will provide direct or indirect employment opportunities for a large section of society. The employment will have positive impact thereby improving the standard of living. The project need details are discussed in Chapter 2 section 2.2. **Benefits of the Project:** The proposed project will generate employment opportunities, improves physical infrastructure, social infrastructure, etc. The details of benefits are discussed in Chapter 8.	Details are covered in Chapter 2 of EIA/EMP Report. Details are covered in Chapter 8 of EIA/EMP Report.
1.2	Submit data for built-up area for each building, the use and occupancy classification in line with NBC 2016 also to be indicated [for differential	Details of built-up area for each building, its use and its occupancy in line with NBC are covered in Chapter 2.	Details are covered in Chapter 2 of EIA/EMP Report.

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	functional requirements].		
1.3	The cost of the Project (capital cost and recurring cost) as well as the cost towards implementation of EMP should be clearly spelt out.	Cost of the project is estimated to be about Rs. 1593.7 crore and Cost for EMP is furnished in EIA/EMP report.	Details are covered in Chapter 10 of EIA/EMP Report.
2.	**Land Environment**		
2.1	Examine details of land use as per Master Plan and land use around 10 km radius of the project site. Analysis should be made based on latest satellite imagery for land use with raw images. Check on flood plain of any river.	Proposed Project will be developed as per the Master Plan of the region. Details of land use study of 10 km radius of the project site with the satellite imagery is provided in Chapter 3.	Details are covered in Chapter 3 of EIA/EMP report
3.	**Land acquisition and R&R**		
3.1	Submit details of environmentally sensitive places, land acquisition status, rehabilitation of communities/villages and present status of such activities.	Details of environmentally sensitive places are provided in Chapter 3 of the report. The License is attached as **Annexure -II** There are no human settlements at site, so rehabilitation of communities/village is not involved.	Details are covered in Chapter 3 of EIA/EMP report. Annexure-II
4.	**Environmental Monitoring and Management**		
4.1	Examine baseline environmental quality along with projected	Details of Baseline environmental quality with respect to major environmental	Details are covered in Chapter 3 & 4.

	incremental load due to the project.	components, viz. air, noise, water, land, soil, biological and socio-economic components is provided in chapter 3 & details of projected incremental load due to the project is provided in chapter 4. The baseline environment study for the project has been done during Winter season (1st Dec, 2023 to 29th Feb, 2024).	The baseline data study report is attached as **Annexure-III.**
4.2	Environmental data to be considered in relation to the project development would be: (a) land, (b) groundwater, (c) surface water, (d) air, (e) biodiversity, (f) noise and vibrations, (g) socio economic and health.	Environmental data has been considered in relation to the project development with respect to (a) land, (b) groundwater, (c) surface water, (d) air, (e) biodiversity, (f) noise and vibrations, (g) socio economic and health. The description of the environment is furnished in EIA/EMP report.	Details are covered in Chapter 3 of EIA/EMP report. The baseline data study report is attached as **Annexure-III.**
4.3	Submit Roles and responsibility of the developer etc for compliance of environmental regulations under the provisions of EP Act.	The Company has a well-defined Environment policy. Structure of Environment Management Cell (EMC). EMC will be responsible for the following: 1. Interaction with the State Pollution Control Board 2. Provide Training	Details are covered in Chapter-10 of EIA/EMP report
4.4	Examine separately the details for	A budget for monitoring of Air, water, Noise	Details are covered in Chapter-6

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	construction and operation phases both for Environmental Management Plan and Environmental Monitoring Plan with cost and parameters.	and Soil will be Rs. 7.0 Lakhs (during construction Phase) and Rs. 9.0 Lakhs (during Operation Phase) to be incurred by the project proponent for undertaking pollution prevention measures during the construction and operation activities. The capital cost for environmental management of the proposed project is estimated to be Rs.3187 lakhs. Rs.444 lakhs per year will be required as annual recurring expenses to meet the recurring expenditure for implementing the measures.	&10 of EIA/EMP report
4.5	Possible carbon footprint contribution from each activities and mitigation measures proposed shall be included as part of Environment Management Plan.	To reduce the carbon footprint from the township a total area of **37,241.664** sqm is proposed for landscape which will be area under tree plantation within the project site and area under organized. 6730 no. of trees are proposed to be planted within project site which will sequester the carbon emissions from project.	--
5.	**Drainage**		
5.1	Submit a copy of the contour plan with slopes, drainage pattern of the site and surrounding area. Any obstruction of the same by the project.	The Geology of the study area and contour plan with slopes, drainage Pattern of the study area and drainage map of the site and surrounding area has been furnished in EIA/EMP report.	Geology of the study area and Contour Map is covered in Chapter-3 of EIA/EMP report Drainage Pattern of the study area

			and drainage map is covered in Chapter-3 of EIA/EMP report
6.	**Forest**		
6.1	Submit the details of the trees to be felled for the project, if any.	There are few trees present at the project site which will be transplanted in the greenbelt.	---
6.2	Submit the present land use and permission required for any conversion such as forest, agriculture etc.	The proposed project will be developed within 54.92 ha. Land has been purchased by M/s Signatureglobal India Limited for Industrial plotted colony Project. No change in land use is proposed.	License is attached as **Annexure-II.**
7.	**Water Environment**		
7.1	Ground water classification as per the Central Ground Water Authority.	As per the Central Ground Water Authority ground water classification, the project falls in over exploited zone.	Details are covered in Chapter-3 of EIA/EMP report
8.	**Water Management**		
8.1	Examine the details of Source of water, water requirement, use of treated wastewater and prepare a water balance chart.	Water supply will be provided through private water tankers and during Operational phase, the source of water will be GMDA. Further details of water requirement, use of treated wastewater and a water balance chart is furnished in EIA/EMP Report.	Details of water requirement is given in Chapter-2
8.2	Rainwater harvesting proposals should be made with due safeguards	65 no. of pits proposed for artificial ground water recharge.	Details of Rainwater harvesting scheme is provided in Chapter 2 of

	for ground water quality.		EIA/EMP report
8.3	Maximize recycling of water and utilization of rainwater. Examine details.	65 no. of pits proposed for artificial ground water recharge.	Details of Rainwater harvesting scheme is provided in Chapter 2 of EIA/EMP report
8.4	Examine soil characteristics and depth of ground water table for rainwater harvesting.	Details of soil characteristics is provided in chapter 3. Details of Rainwater harvesting scheme is provided in Chapter 2.	Details are covered in Chapter-2 & 3 of EIA/EMP report
8.5	Permission from CGWA for abstraction of groundwater, if any, including dewatering during basement excavation.	Not Applicable. The source of water supply will be from GMDA.	--
9.	**Waste Management**		
9.1	Examine details of solid waste generation treatment and its disposal.	Total Solid waste generated in operation Phase is 18139 kg/day. Treatment: **<u>Bio-degradable waste</u>** 1. Bio-degradable waste will be subjected to composting through Organic Waste Converter and the compost will be used as manure. 2. STP sludge is proposed to be used in horticulture. 3. Horticultural Waste is proposed to be	Details are covered in Chapter-2 of EIA/EMP report

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		composted and used for gardening. **Recyclable waste** i. Recyclable waste like paper, plastic, metal etc. will be disposed through local approved recyclers. Waste will be handled inline to 5R principle and we will try to attain Zero waste to Landfill. Details of generation of Solid waste, treatment & its disposal is Provided in chapter 2.	
9.2	Construction & Demolition Waste Management Plan shall be prepared as part of EMP providing details of demolition activities involved along with quantification and disposal mechanism.	Demolition is not involved. A budget for monitoring of Air, water, Noise and Soil will be Rs. 7.0 Lakhs (during construction Phase) and Rs. 9.0 Lakhs (during Operation Phase) to be incurred by the project proponent for undertaking pollution prevention measures during the construction and operation activities.	Details are covered in Chapter-6 of EIA/EMP report
10.	**Energy Requirements**		
10.1	A certificate of adequacy of available power from the agency supplying	The total load of the project is 12883 kW. The power will be supplied by State	Details of power requirement is given in Chapter-2.

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	power to the project along with the load allowed for the project.	Electricity Board.	
10.2	Examine and submit details of use of solar energy and alternative source of energy to reduce fossil energy consumption. Energy conservation and energy efficiency.	To conserve the energy resources, good practices will be followed during the construction phase such as turning off lights when not in use, ensuring fuel efficiency of motors and vehicles through proper maintenance and minimal work at night. The principles of energy conservation will also be embedded in the buildings through use of energy efficient fixtures, maximum availability of natural light and use of solar energy for street lighting.	Details are covered in Chapter-7 of EIA/EMP report
10.3	DG sets are likely to be used during construction and operational phase of the project. Emissions from DG sets must be taken into consideration while estimating the impacts on air environment.	There is provision of 2no. of DG set of total capacity 1100kVA for Commercial Facility which includes 1 x 750kVA +1x 350 kVA and 2no. of DG set of total capacity 1750 kVA for Common Services which includes 1 x 750kVA +1x 1000 kVA are proposed for power back up. The DG sets will be equipped with acoustic enclosure to minimize noise generation and adequate stack height for proper dispersion. 24-hours average maximum Incremental GLC of NO_2, SO_2, PM_{10}, $PM_{2.5}$ and CO were 0.66	Details are covered in Chapter-4 of EIA/EMP report

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		µg/m³, 0.07µg/m³, 0.68µg/m³, 0.43 µg/m³ & 0.73 µg/m³, occurred respectively at (700m distance) from the DG sets occurred at the same distance. It was found that GLC of SO_2 was less than the permissible limit of 80µg/m³ (as per CPCB guidelines) under worst meteorological condition with meteorological data monitored from 1st Dec,2023 to 29th Feb 2024	
11.	**Road and Traffic**		
11.1	Examine road/rail connectivity to the project site and impact on the traffic due to the proposed project. Present and future traffic and transport facilities for the region should be analysed with measures for preventing traffic congestion and providing faster trouble-free system to reach different destinations in the city.	The Nearest Highway is NH-48 which is adjacent to the 8.7 km site in North west directi3.8 km28 is 0.58 km towards SW direction, SH-25 which is 4.1 km (S), NH-919 is 3.8 km towards S direction, Western Peripheral Expressway is 8.7 km towards NE direction, MDR 132 is 5.1km towards NE direction, & NH-352W which is 9.8 km (S) direction away from project site. The nearest railway station being Inchhapuri Railway Station is about 12.6 km (NW) away from the project site. The nearest Airport is Indira Gandhi International Airport 40 km (NE) from the project site.	Details are covered in Chapter-7 of EIA/EMP report

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11.2	A detailed traffic and transportation study should be made for existing and projected passenger and cargo traffic.	Traffic Management Plan is provided in chapter 7.	Traffic Management Plan is provided in chapter 7.
11.3	Examine the details of transport of materials for construction which should include source and availability.	Construction materials will be purchased from local supply chain.	--
12.	**Disaster Management Plan**		
12.1	Submit details of a comprehensive Disaster Management Plan including emergency evacuation during natural and man-made disaster. This should cover details of vulnerabilities due to natural and manmade hazards (earthquake, flooding, cyclone, landslides, fire etc.) and details of disaster mitigation efforts for buildings and infrastructure through structural sufficiency and Fire and Life Safety compliance in line with National Building Code NBC, 2016.	Details of Disaster Management plan including emergency evacuation during natural and man-made disaster is provided in chapter 7.	Details are covered in Chapter-7 of EIA/EMP report
13.	**Court Cases**		
(xxv)	Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the Project should be given.	No Litigation is pending against the project.	

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14.	**Miscellaneous**		
14.1	Any further clarification on carrying out the above studies including anticipated impacts due to the project and mitigative measure, project proponent can refer to the model ToR available on Ministry website "http://moef.nic.in/Manual/Townships".	Complied	--

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CHAPTER-1 : INTRODUCTION

1.1 PREAMBLE

1.1.1 General

Early identification and characterization of critical environmental impacts allow the public and the government to form a view about the environmental acceptability of a developmental project and what conditions should apply to migrate or reduce those risks and impacts.

EIA is technical exercise, to establish baseline environmental conditions to predict environmental impacts assess their significance and provide recommendations for their mitigation. The impact assessment covers both construction and operation phase of the development. The report covers areas such as noise, air quality, ecology, water quality & hydrology, local architecture, landscape & visual character, sustainability and socio-economics. The report describes how the project has been improved, through the EIA process. This report has been prepared as per the EIA Notification, 2006 & amendments, EIA Guidance manual for Building, Construction and Area Development projects as guiding documents.

1.2 PURPOSE OF REPORT

The Industrial Plotted Colony projects have the potential in altering environmental resources of any area. They cause stress on local environmental assets of the rural area and thus become the potential source for limiting the growth of the city. Unplanned construction and operation of such projects usually result in impacts on various facilities of the Environment. Keeping the above issues under consideration, an Environmental Impact Assessment (EIA) study is conducted.

The basic objective of this EIA study is to collect the baseline data within the impact zone to identify the associated impacts and propose suitable mitigation measures due to the construction and operation of the development. The objectives of the EIA study can be summarized as follows:

- To identify and describe the elements of surroundings and environment likely to be affected by the project
- To establish the baseline environmental and social scenario of the project surroundings
- To identify, predict and evaluate environmental and social impacts expected to arise during the construction and operation phase of the project in relation to the sensitive receptors.
- To develop EMP mitigation measures so as to minimize pollution, environmental disturbance and nuisance during construction and operation of the project.
- To design and specify the monitoring and auditing requirements necessary to ensure the implementation and effectiveness of the mitigation measures adopted.

The Ministry of Environment, Forests & Climate Change (MoEFCC) introduced the Environment Impact Assessment (EIA) Notification, 2006 on 14th September 2006, which not only re-engineered the entire Environment Clearance (EC) process specified under the EIA notification 1994, but also introduced a number of new developmental sectors which would require prior environmental clearance. The EIA Notification, 2006, and its amendments has notified a list of developmental Sectors which have been further categorized as A or B based on the spatial extent of potential impacts and potential impacts on human health and natural and manmade resources.

Category B projects have been categorized as B1 and B2. In this regard, township and area development projects are covered in Category-B1, Schedule 8 (b) and require clearance from Ministry of Environment, Forests & Climate Change (MoEFCC).

1.3 IDENTIFICATION OF PROJECT & PROJECT PROPONENT

1.3.1 Identification of Project

M/s Signatureglobal India Limited aims to develop an Industrial Plotted Colony Project keeping in mind the growing demand of the local population. We will propose Category B industries.

The Project site is located Village- Shidrawali, Tehsil –Manesar, District- Gurugram, Haryana on a land measuring 54.92 ha or 5,49,258.716 m^2.

The project facilities include:

- Industrial Plotted Development
- Residential Plotted Development
- Community facilities
- Commercial facilities

The baseline environment study was done for the period from December 2023 to February, 2024 as per standard ToR of MoEFCC.

Standard ToR application was online submitted to MoEFCC, New Delhi vide online application No. SIA/HR/INFRA2/494250/2024 on 10.09.2024.

Standard ToR letter issued by SEAC Haryana vide Letter No. TO24B3813HR5427969N dated 10.09.2024. (Copy attached as Annexure-**I**).

EIA/EMP report is being submitted to SEIAA, Haryana for grant of EC to the project.

Environment in EIA context mainly focuses, but is not limited to physical, chemical, biological, geological, social, economical and aesthetic dimensions along with their complex interactions, which affect individuals, communities and ultimately determines their forms, character, relationship and survival. In EIA context, effect and impact can

often be used interchangeably. However, impact is considered as a value judgment of the significance of an effect.

1.3.2 Project Proponent

M/s Signatureglobal India Limited, is promoted by a group of experienced businessmen.

The registered address of M/s Signatureglobal India Limited is 13th Floor, Dr. Gopal Das Bhawan, 28 Barakhamba Road, New Delhi- 110001.

Table 1-1 Details of PP

Name	Designation
Mr. Vineet Kumar	Authorised Signatory, M/s Signatureglobal India Limited

1.4 BRIEF DESCRIPTION OF NATURE, SIZE, LOCATION OF THE PROJECT AND ITS IMPORTANCE TO THE COMPANY REGION

1.4.1 Nature & Size of Project

The present proposal is for construction of Industrial Plotted Colony Project with Plot area = 5, 49,258.716 m^2 (135.7250 acre) and total built-up area = **7,24,895.645**m^2

Total Project cost is INR 1593.7 Cr including Land, Development and Machinery Cost.

1.4.2 Location of Project

The project site is located at Village- Shidrawali, Tehsil –Manesar, District- Gurugram, Haryana.
The geographical co-ordinates of centre of project site are 28° 14' 59.529" N and 76° 49' 48.329"E.

The Co-ordinates of the project site are given below:

Table 1-2 Pillar Co-ordinates of Project Site

Pillar No.	Longitude	Latitude
1	28° 14' 59.529" N	76° 49' 48.329" E
2	28° 14' 53.282" N	76° 49' 31.206" E
3	28° 15' 6.792" N	76° 49' 28.441" E
4	28° 14' 56.620" N	76° 49' 6.138" E
5	28° 14' 50.247" N	76° 49' 1.477" E
6	28° 14' 40.487" N	76° 48' 59.748" E
7	28° 14' 37.528" N	76° 49' 7.433" E
8	28° 14' 40.625" N	76° 49' 20.454" E
9	28° 14' 41.016" N	76° 49' 33.251" E
10	28° 14' 38.555" N	76° 49' 40.599" E
11	28° 14' 32.254" N	76° 49' 51.380" E
12	28° 14' 41.918" N	76° 49' 51.222" E

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13	28° 14' 49.836" N	76° 49' 46.127" E

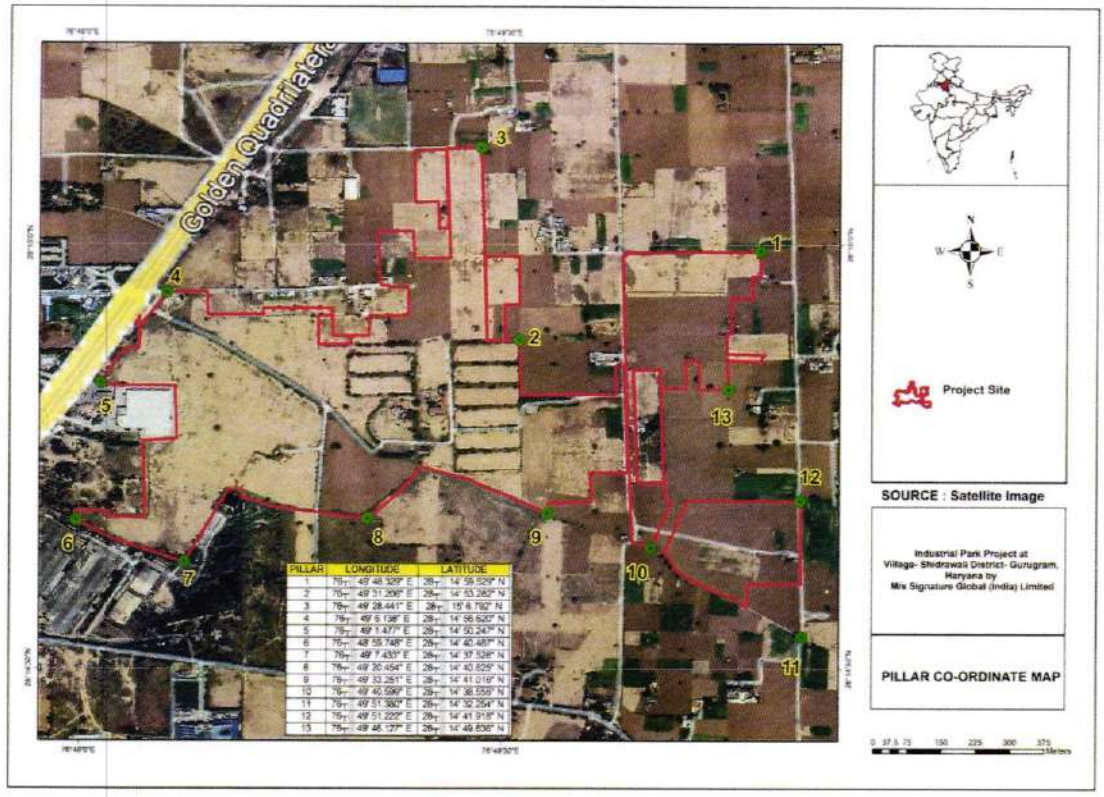


Figure 1-1 Pillar Co-ordinate Map of Site

1.4.3 Importance of Project

The project is being developed to meet the growing demand of industrial Plotted Colony projects of the local community in the region.

1.5 SCOPE OF THE STUDY

1.5.1 Environmental Clearance Process

The Ministry of Environment, Forests & Climate Change, Govt. of India, through EIA notification No. SO.1533 (E) dated 14th September 2006 and subsequent amendments under the Environment Protection Act 1986 have placed Townships and Area Development Projects at Sl. No. 8(b) in the list of projects requiring prior environmental clearance. Further, as the built-up area of the of the proposed project is more than 1,50,000 m^2, it falls under category 'B' of the schedule and shall require prior environmental clearance from the State Environment Impact Assessment Authority.

The Environmental Clearance process for the project will comprise of three stages. These stages in sequential order are given below:

1. Screening
2. Scoping
3. Appraisal

Screening and Scoping of the project has already been completed and it has been granted Standard Terms of Reference (ToR) by MoEF&CC, New Delhi.

M/s Signatureglobal India Limited has engaged M/s GRC India Pvt. Ltd., Noida to carry out Environmental Impact Assessment (EIA) Study for the project. The assessment covers the baseline data generation, predictions and evaluation of impact on various environmental components and formulation of Environmental Management Plan and Disaster Management Plan.

The EIA report has been prepared as per the Generic Structure of Environmental Impact Assessment Notification, 2006 (Appendix III) and Standard Terms of Reference issued by SEAC Haryana.

The report has been prepared based on the following reference documents:-

- ✓ Technical EIA Guidance Manual for Building & Construction project, Prepared by Ministry of Environment and Forests.
- ✓ National Building Code

The EIA/EMP study consists of the following elements:-

1. To generate baseline information regarding status of environment by carrying out (a) baseline survey of environmental parameters like air, water, noise and soil and (b) secondary data required for impact assessment from the available sources.
2. To identify set of activities which have a potential impact on the environment or the public and to provide the mitigation measures for the same, on the basis of the details of the project
3. To carry out Land Use / Land Cover (LULC) pattern studies in project site and within 10 km radius study area to identify the impact on land due to the operation of the plant
4. To predict pollution load/stress level in air, water, land and other environmental matrixes due to the sources identified.
5. To examine the availability and adequacy of the envisaged measures for control of pollution/sources of stress, so as to meet the statutory provisions, and propose mitigate measures, if needed
6. To analyze the consequences of potential accidents and the steps adopted to avert accidents and the plans to mitigate consequences in the case of severe accidents.
7. To specify the environmental monitoring required in the operational phase of the plant to evaluate the effectiveness of the various environmental control measures adopted.
8. To assess the benefits arising from the project
9. To delineate the administrative mechanisms warranted to oversee (a) the implementation of control/EMP mitigative measures during operation of the plant, (b) operation and maintenance of such systems subsequently, (c) compliance with monitoring programs and (d) provision of required budget

1.6 STRUCTURE OF EIA REPORT

The EIA report has been structured as per Appendix-III of the EIA Notification, 2006 complying with Standard ToR prescribed by SEAC, Haryana. Structure of the EIA report is as below:

CHAPTER 1 – INTRODUCTION

The chapter provides description of project background, site and surroundings, objectives, scope and organization of the study.

CHAPTER 2 – PROJECT DESCRIPTION

This chapter provides information on project and capacity; need for the project; location; size or magnitude of operation; technology and process description; maps showing project layout, component of projects etc.

CHAPTER 3 – DESCRIPTION OF THE ENVIRONMENT

This chapter deals with the methodology and findings of field studies undertaken with respect to ambient air quality, meteorology, water quality, soils characteristics, noise levels and ecology to define the various existing environmental status in the area of the project. This also deals with the infrastructural development as a part of project and sources of pollution from the proposed new project.

CHAPTER 4 – ANTICIPATED ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

In this chapter, the potential impacts of the proposed new project, which could cause significant environmental concerns, are identified and discussed. This discussion will form the basis for environmental management activities.

CHAPTER 5 – ANALYSIS OF ALTERNATIVES (TECHNOLOGY AND SITE)

Not prescribed in Standard ToR letter issued by SEAC, Haryana

CHAPTER 6 – ENVIRONMENTAL MONITORING PROGRAM

This chapter will include ascertaining the environmental impacts; state of pollution within the project area and in its vicinity; planning for predictive or corrective actions in respect of pollution to keep it within permissible limits.

CHAPTER 7 – ADDITIONAL STUDIES

This chapter will include outcomes of public consultation, Identification of hazards and risk assessment, social impact assessment, R&R action plan, biodiversity conservation plan, watershed management etc.

CHAPTER 8 – PROJECT BENEFITS

This chapter deals with improvements in the physical infrastructure, social infrastructure, employment potential and other tangible benefits due to proposed project activity.

CHAPTER 9 – ENVIRONMENTAL COST BENEFIT ANALYSIS

Not prescribed in Standard ToR letter issued by SEAC, Haryana

CHAPTER 10 – ENVIRONMENTAL MANAGEMENT PLAN

This chapter will include the description of administrative aspects of ensuring that the mitigation measures suggested are implemented and their effectiveness is monitored, after approval of the EIA.

CHAPTER 11 – SUMMARY& CONCLUSION

This will constitute the summary of the EIA Report.

CHAPTER 12 – DISCLOSURE OF CONSULTANT

This will include the names of the consultants engaged in preparation of EIA and nature of consultancy rendered by the experts.

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CHAPTER-2 : PROJECT DESCRIPTION

2.1 GENERAL DESCRIPTION

2.1.1 Type of the Project

M/s Signatureglobal India Limited aims to develop Industrial Plotted Colony Project. We will propose Category B industries.

The Project site is located Village- Shidrawali, Tehsil –Manesar, District- Gurugram, Haryana on a land measuring 54.92 ha or 5,49,258.716 m^2.

The company has vast experience in planning and construction of Industrial Plotted Colony. The project facilities include:

- Plotted Development
- Community facilities
- Commercial facilities
- Plotted Industries

2.1.2 Salient Features of the Project

Salient features of the Project are given below in Table-2.1:

Table 2-1 Salient Features of the Proposed Project

S. N.	Items	Details
1	Name of the Project	Industrial Plotted Colony Project
2	S. No. in the schedule	8 (b), Townships and Area Development Projects
3	Proposed capacity / area / length /tonnage to be handled/command area/lease area/number of wells to be drilled	Plot Area = 5,49,258.716 m^2(135.7250 acres) Built-Up Area = **7,24,895.645**m^2
4	Category of Project	Category B1
5	Toposheet	H43W16_53D16 & H43W15_53D15
6	Sanctuaries / National Parks/ Biospheres, etc	No Sanctuaries / National Parks/ Biospheres, etc. falling within 10 km of the project site.
7	Project Cost	INR 1593.7 Cr
8	Nearest Airpoprt	IGI Airport is approx. 40 km (NE)
9	Nearest Railway Station	Inchhapuri Railway Station is approx. 12.6 km (NW)
10	Road Connectivity	NH-48 adjacent (NW), SH 28 approx. 0.58 km (SW), SH 25 approx. 4.1 km (S), NH 919 approx. 3.8 km (S) NH 352W approx.. 9.5 km (NW)

		Western Periphery Expressway approx.. 8.7 km (NE)

2.2 NEED OF THE PROJECT

The project will provide direct or indirect employment opportunities for a large section of society.

Employment will have positive impact thereby improving the standard of living.

2.3 LOCATION OF THE PROJECT (MAPS SHOWING GENERAL LOCATION, SPECIFIC LOCATION, PROJECT BOUNDARY & PROJECT SITE LAYOUT)

The project site is located at Village-Shidhrawali, Tehsil-Manesar, District Gurugram, Haryana.

The Nearest Highway is NH-48 which is adjacent to the project site , SH-28 is 0.58 km towards SW direction, SH-25 which is 4.1 km (S), NH-919 is 3.8 km towards S direction, Western Peripheral Expressway is 8.7 km towards NE direction, MDR 132 is 5.1km towards NE direction, & NH-352W which is 9.5 km (S) direction away from project site.

The nearest railway station being Inchhapuri Railway Station is about 12.6 km (NW) away from the project site.

The nearest Airport is Indira Gandhi International Airport 40 km (NE) from the project site.

The geographical co-ordinates of centre of project site are 28° 14' 59.529" N and 76° 49' 48.329"E.

2.4 JUSTIFICATION FOR THE PROJECT SITE

The operation of project and other allied facilities will provide direct or indirect employment opportunities for a large section of society. The employment will have positive impact thereby increasing the quality of life.

The other factors considered while selecting the project site are:

a) Availability of adequate land.
b) Availability of required quantity of water throughout the year
c) Good connectivity to the highway
d) Availability of local labour during construction phase
e) No environmentally sensitive location in vicinity
f) Good law and order situation

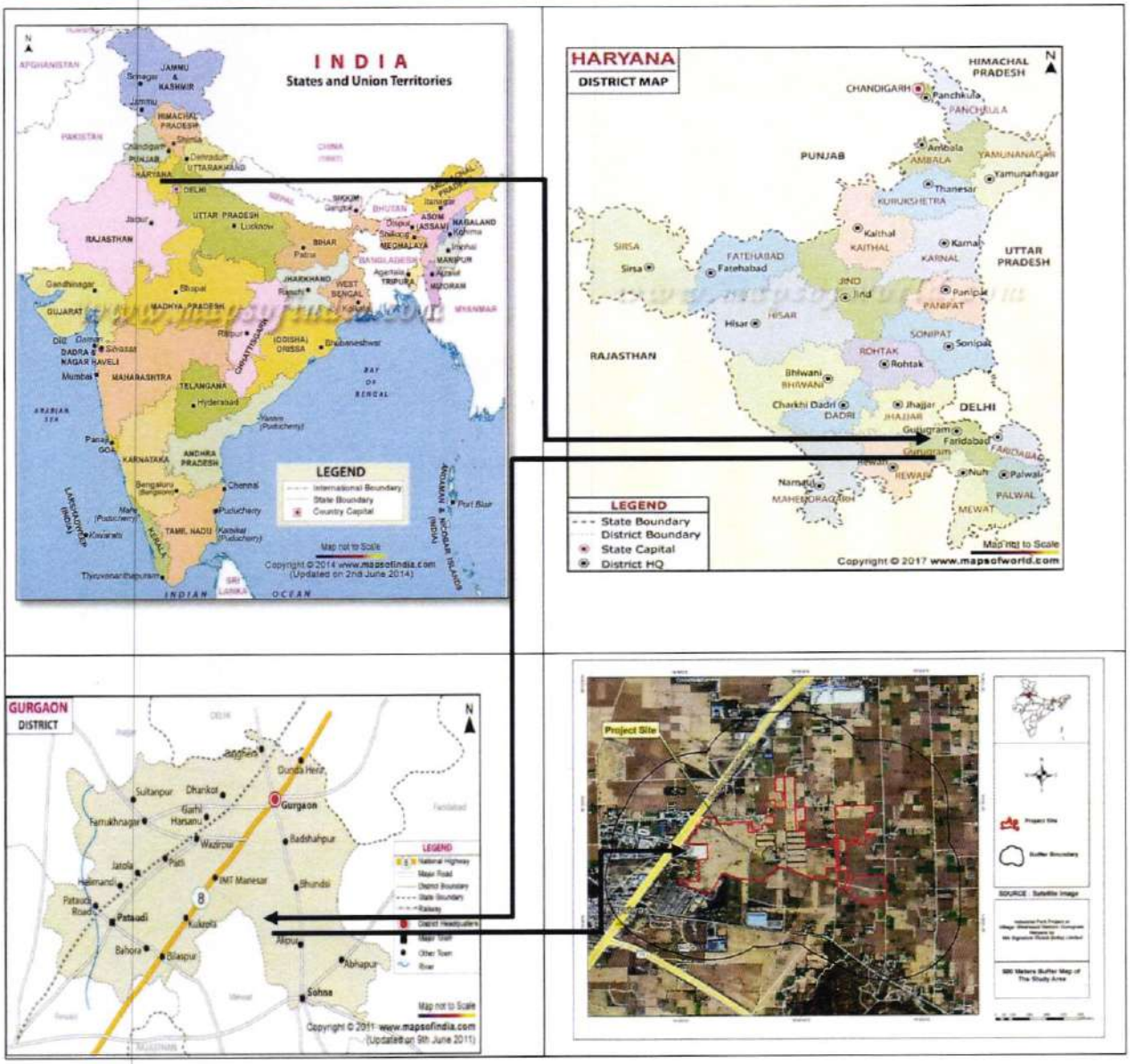


Figure 2-1 Location of the Project Site

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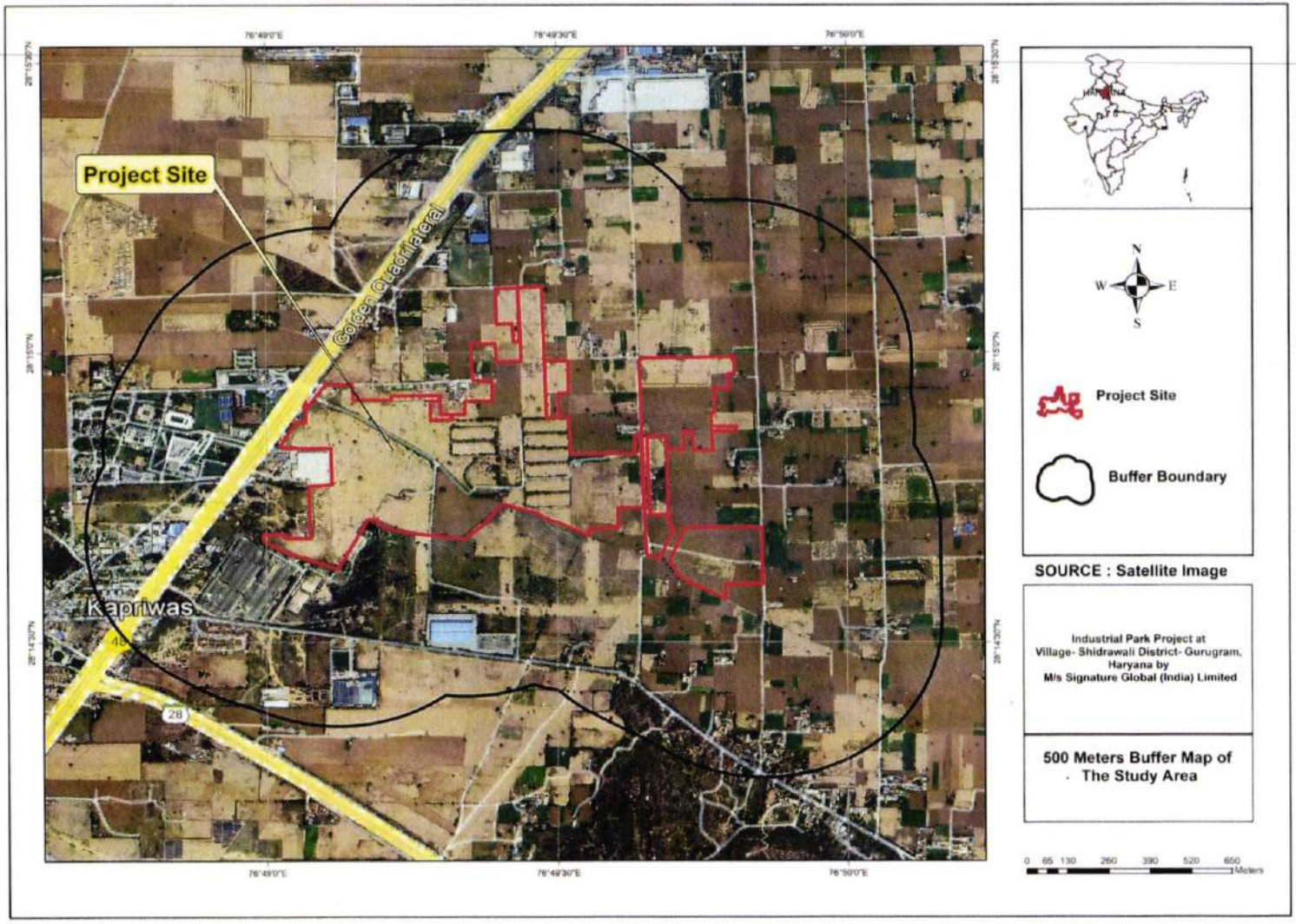


Figure 2-2: 500 m radius map

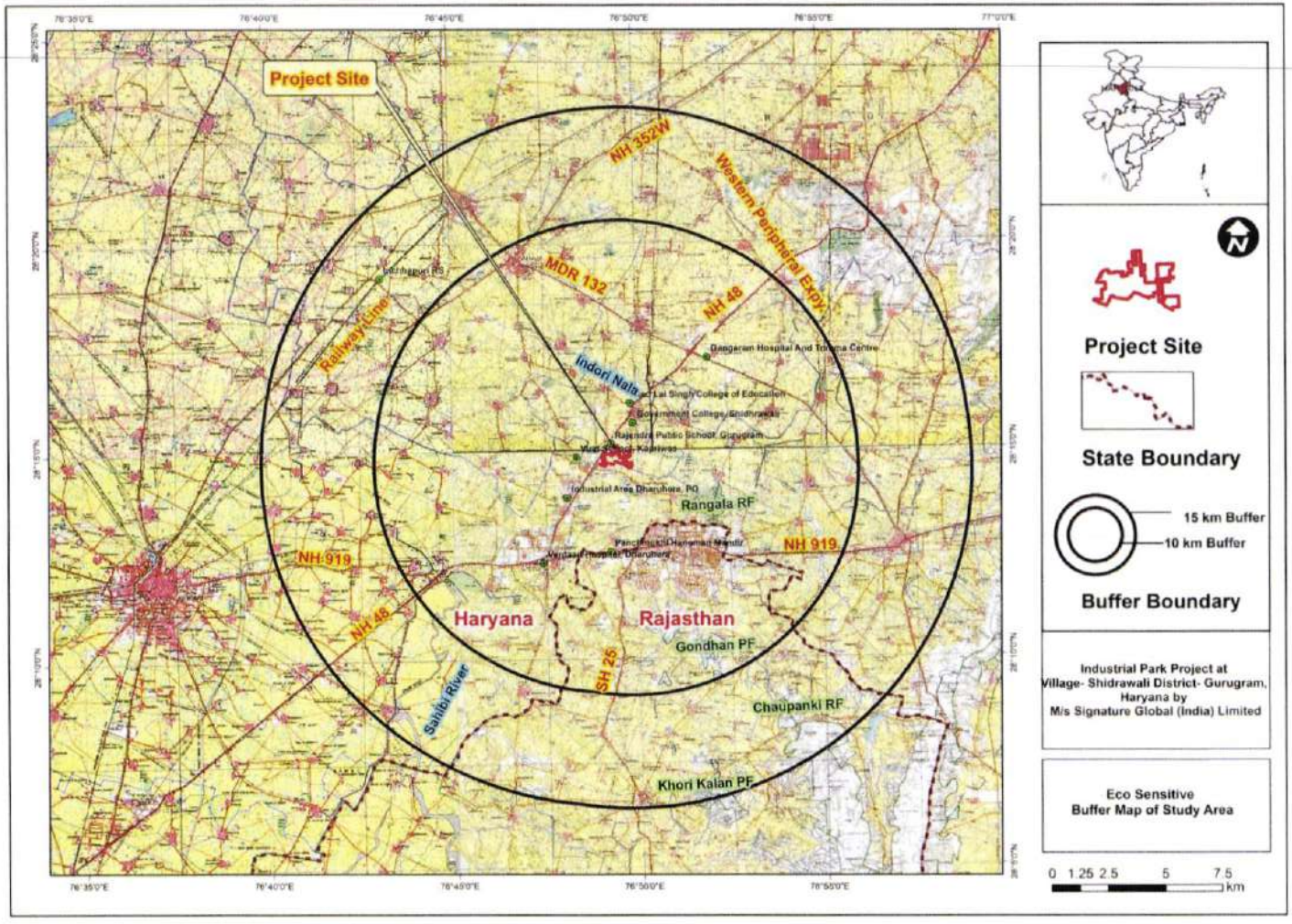


Figure 2-3 10 & 15 km radius around Project Site

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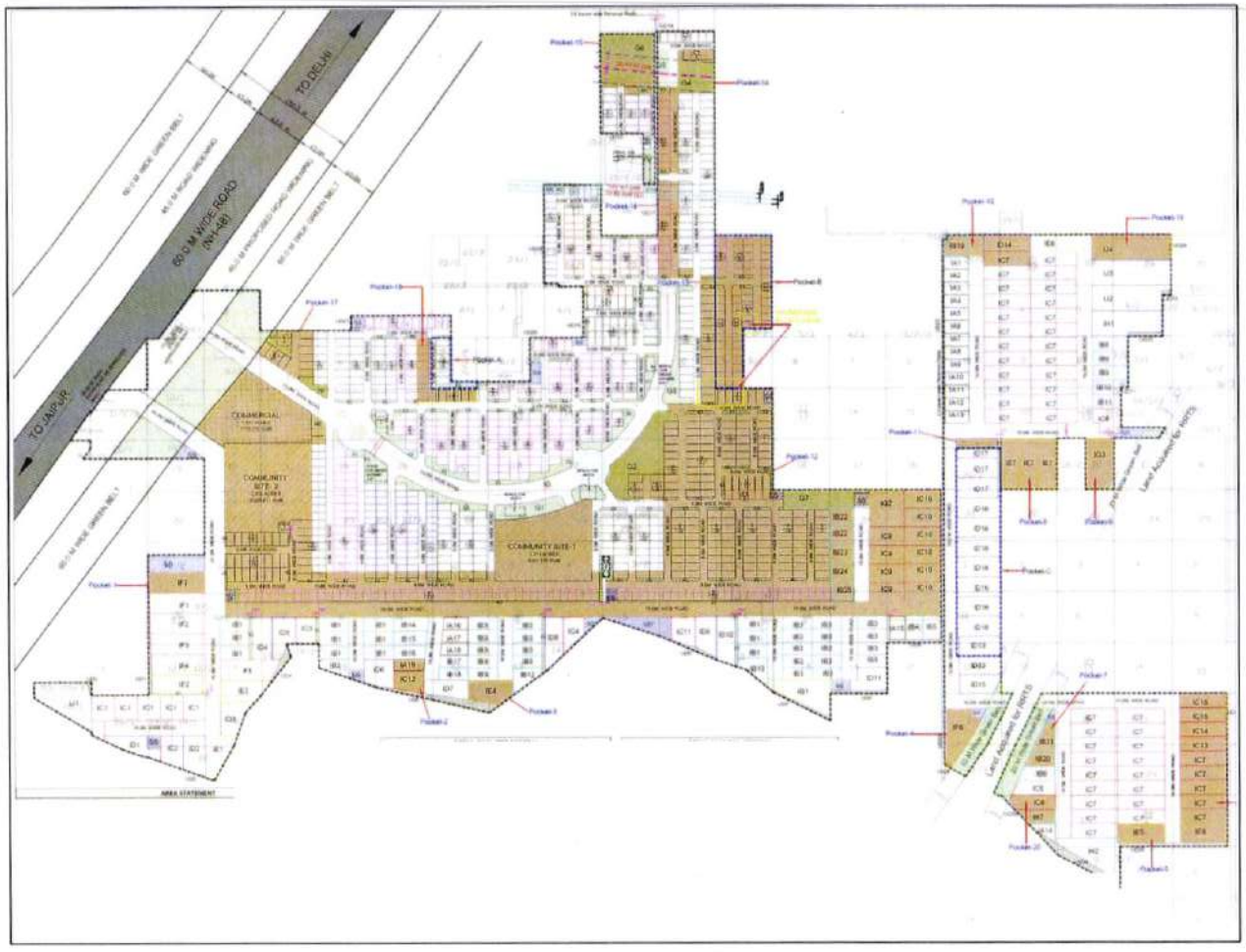


Figure 2-4 Site Plan

Signatureglobal (India) Ltd.

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2.5 SIZE OR MAGNITUDE OF OPERATION

2.5.1 Complete Area Statement

The total area of the site is 5,49,258.716 **m² (135.7250 acre).** The detailed Area Statement is provided below in Table 2.2:

Table 2-2 Detailed Area Statement

S. No.	Particulars	Area (in m²)
1.	**Total Licensed area**	**5,49,258.716**
2	Area under Road (Delhi –Jaipur Road) Widening	10,194.015
3	Area under proposed Green Belt of Delhi –Jaipur Road (considering 60 m wide on either side)	13677.139
4	Area under green belts of RRTS (considering 20m on either side)	5293.280
5.	Total area to be deducted (2+3+4)	29,164.434
6.	**Balance area (1-5)**	**5,20,094.282**
7.	**50% benefit of area under road** (Delhi –Jaipur Road) Widening, Green Belt of Delhi –Jaipur Road & green belts of RRTS	**11,935.577**
8.	**Net Area (6+7)**	**5,32,029.859**
9.	Area under undetermined use	5,516.641
10.	**Net Planned area (8-9)**	**5,26,513.219**
11.	**Proposed Area under plots**	**319,416.066**
	• Area under Industrial Plots	1,84,280.882
	• Area under Residential plots	1,27,433.845
	• Area under Commercial plots	7701.339
12.	**Total Permissible FAR**	**5,78,220.453**
	• Industrial Permissible FAR (1.250)	2,30,351.102
	• Commercial Permissible FAR (4.2857/Plot)	11,417
	• Residential Permissible FAR (2.64)	3,36,452.351
13.	**Total Proposed FAR**	**5,78,220.453**
	• Industrial FAR	2,30,351.102
	• Commercial FAR	11,417
	• Residential FAR	3,36,452.351
14.	NON-FAR Area	**1,46,675.192**

15.	**Total Built up area**	**7,24,895.645**
16.	**Green Area (20% of Plot area)**	**1,05,302.64**

Table 2-3 Land use break-up of Site

S. No	Description	Area (acre)	Area (m^2)	Percentage of Net planned area (%)
1	Area under Industrial Plots	45.537	1,84,280.882	33.55
2	Area under DDJAY Residential Component	31.490	1,27,433.845	23.02
3	Area under Commercial Plots	1.903	7701.339	1.402
4	Area under Road/Road widening/Open/Green /Public Facilities etc	56.795	2,29,842.913	41.84
	Total land area	135.7250	**5,49,258.716**	**100**

2.5.2 Total Population Details

The total population of the project will be 61,489 persons. The detailed population breakup is given below in the following **Table 2-4.**

Table 2-4: Population Break-up

Table 2-4(a): Population Break-up for Residential Population

S. No.	Description	Total no. of floors per plot	DUs/FAR (sqm)	PPU	Total Population
A.	**Residential plots (Type 1)**				
1.	Residential plots	4	285	18	5130
2.	Visitor's	10% of Residential population			513
3.	Staff (Operation & Maintenance)				200
B.	**Residential plots (Type 2)**				
4.	Residential plot Population	4	677	18	12186
5.	Visitor's	10% of Residential population			1219
6.	Staff (Operation & Maintenance)				200
	Grand Total of Residential Population				**19,448**

Table 2-4(b): Population Break-up for Community buildings, Commercial & Population

S. No.	Description	Area (m^2)	PPU/ Person/m^2 FAR	Total Population

C.	**Community Building -1**			
7.	**Community Building Population**	9351.919	1.4	**6680**
8.	**Staff**	10% of Community Building 1 population		668
9.	**Visitors**	90% of Community Building 1 population		6012
D.	**Community Building -2**			
10.	**Community Building Population**	10290.508	1.4	**7351**
11.	**Staff**	10% of Community Building 2 population		736
12.	**Visitors**	90% of Community Building 2 population		6615
	Total Community buildings population			**14,031**
E.	**Commercial Building**			
13.	**Retail Shops (Ground Floor)**	4,566.8	(@ 1 Person/3 m^2)	**1522**
	• Staff	(@10% of the Retail shop population)		152
	• Visitors	(@90% of the Retail shop population)		1370
14.	**Retail Shops (Above Floors)**	6,850.2	(@ 1 Person/6m^2)	**1142**
	• Staff	(@10% of the Retail shop population)		114
	• Visitors	(@90% of the Retail shop population)		1028
	Total Commercial building population			**2664**
	Grand total of Community buildings & Commercial buildings population			**16,695**

Table 2-4(c): Population Break-up for Industrial Population

S. No.	Description	Area (m^2)	PPU/ Person/m^2 FAR	Total Population
F.	**Industrial Plots**			
	Industrial plots population	2,30,351.102	(@ 1 Person/10 m^2)	23,035
	Visitors	10% of Industrial plots population		2303
	Total Industrial plots population			**25,338**

2.5.3 Water Requirement

During the Construction Phase the Source of water will be Ground water. During operation phase, the source of water supply will be GMDA. The total water requirement for the project will be approx. 3,221 KLD.

The domestic water demand for Residential (Type 1 & 2), Community Buildings, Commercial Buildings, & industrial Plots is 2905 KLD. The freshwater requirement for Residential (Type1 &2), Community Buildings, Commercial Buildings, & industrial Plots will be 1943 KLD. However, one-time freshwater demand for the project will be 3,221 KLD.

The calculation of daily water requirement and wastewater is given below in Table 2-5 to 2-8 respectively.

Table 2-5: Calculations for Daily Water Demand

S. No.	Description	Occupancy	Rate of water demand (lpcd)		Total Water Requirement (KLD)		
			Fresh	Flushing	Fresh	Flushing	Total
A.	**Domestic Water for Residential plots (Type 1)**						
	Residential plots	5130	@ 65 lpcd	@ 21 lpcd	333	108	441
	• Staff	200	@25 lpcd	@20 lpcd	5	4	9
	• Visitors	513	@ 10 lpcd	@5 lpcd	5	3	8
					343 KLD	**115 KLD**	**458 KLD**
	Total Domestic Water= 458 KLD						
B.	**Domestic Water for Residential plots (Type 2), Community buildings, & Commercial buildings**						
	Residential plots (Type 2)	12186	@ 65 lpcd	@ 21 lpcd	792	256	1048
	• Staff (for Community buildings, Operation & Maintenance for residential plots (type 2) & Commercial building)	1870	@25 lpcd	@20 lpcd	47	37	84
	• Visitors (for	16,244	@ 10	@5 lpcd	162	81	243

	Community buildings, Residential Plots, & Commercial building)		lpcd				
					1001 KLD	**374 KLD**	**1375 KLD**
Total Domestic Water for Residential plots (Type 2), Community buildings & Commercial Buildings = 1375 KLD							
C.	**Domestic Water for Industrial plots**						
	• Industrial Plots	23,035	@25 lpcd	@20 lpcd	576	461	1037
	• Visitors (for Industrial plots)	2303	@ 10 lpcd	@5 lpcd	23	12	35
					599 KLD	**473 KLD**	**1072 KLD**
	Total Domestic Water for Industrial plots						**1072 KLD**
D.	**Horticulture**	1,05,302.64	3 l/sqm		316 KLD		
Grand Total (A+B +C+D) 3,221 KLD							

Table 2-6: Wastewater Calculation for Residential plots (Type 1)

Domestic Water	**458 KLD**
• Fresh water	343 KLD
• Flushing water	115 KLD
Waste water [@80% fresh + 100% flushing]	274.4 +115 = **389 KLD**
STP Capacity	500 KLD

Table 2-7: Wastewater Calculation for Residential plots (Type 2), Community buildings, & Commercial buildings

Domestic Water	**1375 KLD**
• Fresh water	1001 KLD
• Flushing water	374 KLD
Waste water [@80% fresh + 100% flushing]	801 + 374= **1175 KLD**
STP Capacity	1410 KLD

Table 2-8: Wastewater Calculation for Industrial plots

Domestic Water	**1072 KLD**
• Fresh water	599 KLD
• Flushing water	473 KLD
Waste water [@80% fresh + 100% flushing]	479 + 473= **952 KLD**

STP Capacity	1150 KLD

WASTE WATER & TREATEMENT

Approx. 2516 KLD wastewater will be generated from the **Residential plots (Type 1 & 2), Community buildings, Commercial buildings & Industrial plots**. Wastewater will be treated in an in-house STP of total capacity 3060 KLD (500 KLD +1410 KLD +1150 KLD).

STP 1 [For Residential plots (Type 1)]: 500KLD

STP 2 [For Residential plots (Type 2), Community buildings, & Commercial buildings]: 1410 KLD

STP 3 [For Industrial plot]:1150 KLD

Treated wastewater will be used for flushing and horticulture and remaining water will discharge to External sewer.

Water balance diagram for summer, monsoon & winter season is presented below:

- The process has long retention time and can absorb shock load situation.
- Reduced net daily water requirements, source for Flushing and Horticultural purposes by utilization of the treated waste water.
- Reduced dependence on the public utilities for water supply and sewerage systems.
- The process produces a well-oxidized sludge in small quantities only, which can be removed and used as manure.

a. Wastewater Details

(a)	Daily load	:	2516 KLD
(b)	Duration of flow to STP	:	24 hours
(c)	Temperature	:	Maximum 32°C
(d)	pH	:	6.5-8.5
(e)	Colour	:	Mild
(f)	T.S.S. (mg/l)	:	250-400 mg/l
(g)	BOD_5 (mg/l)	:	300-400 mg/l
(h)	COD (mg/l)	:	600-700 mg/l

b. Treated effluent

(a)	pH	:	6.0 to 8.5
(b)	B.O.D.	:	<10 mg/l
(c)	C.O.D.	:	<30 mg/l
(d)	Total Suspended Solids	:	<20mg/l

c. Treatment Technology

MBBR TECHNOLOGY

Moving bed biofilm reactor technology is based on the principle of attached growth process. Raw sewage will be collected under gravity into the equalization tank after allowing to pass through the bar screen. Screens will be provided in screen chambers and it will be manually cleaned by going down to a platform. The bar screen, by removing coarse solids from the sewage help in protecting the raw sewage pump.

Fully submersible centrifugal non clog sewage handling pump will be provided in the collection cum equalization tank to pump the collected waste water to the next MBBR tanks. Automatic level controller will be provided in the tank to turn the pump off at the low water level in the tank and to start the pump when water level is high automatically. Air will be introduced in this tank to prevent any potential foul smell problem & to provide the mixing of wastewater to avoid the sedimentation of solids in this tank. Air Grid used for aeration purpose shall be non-clog.

The sewage collected in equalization tank is pumped the moving bed bioreactor. There shall be two nos. of bioreactors in series for the efficient working and removal of BODs for the required retention time. The process inside the moving bed bioreactors consists of adding small cylindrical-shaped polyethylene/polypropylene carrier elements in aerated basins to support biofilm growth. The small cylinders are provided with a cross inside the cylinder and longitudinal fins on the outside. The biofilm carriers are maintained in the reactor by the use of a perforated plate with appropriate slot at the tank outlet. Air agitation or mixers are applied in a manner to continuously circulate the packing. The packing may fill 25 to 50 percent of the tank volume. Specific surface area of the packing is about 450-500m^2/m^3 of bulk packing volume. The waste water from first bioreactor flows by gravity through the perforated plate/mesh to the next bioreactor kept in series. Inside the bioreactors, aerobic bacteria grow in an attached growth from around the moving plastic media inside the reactors. The bacteria have to reduce BOD & COD of waste water in the presence of oxygen provided through the air grids located at the bottom of the reactors. The Process does not require any return activated sludge flow or backwashing.

From the bio-reactors, the effluent passes by gravity into the clarifier (Tube Settling Tank). Clarifier will be a hopper bottom sedimentation tank provided with appropriate size PVC tube deck media. The suspended solids will settle at the bottom of the tank & clear supernatant will overflow to filter feed tank through outlet launder. The collected sludge at bottom shall be transferred through pumps to sludge holding tank.

The clear supernatant after clarifier will be collected in to filter feed tank. This tank will act as housing tank for filter feed pumps. The clarified & dis-infected water will be then fed to filtration unit.

Filtration unit consisting of Dual Media sand filter, activated carbon filter and ultra-filtration system (optional) will remove the residual impurities such as odor/color, suspended solids, BOD/COD. The treated water after the filtration unit will be collected in Irrigation cum Flushing water storage tank from where it is transferred to flushing water tank at terrace & Irrigation System.

Excess sludge from the bottom of the settling tank will be removed and transferred to sludge holding tank. Air grid shall be provided in this tank to avoid conversion into anaerobic conditions, thickening of sludge and keep sludge in homogenous condition. The digested & thickened sludge shall be further thickened through Sludge Dewatering System (Filter press with screw pump) and disposed-off periodically through closed tanker or can be reused as manure.

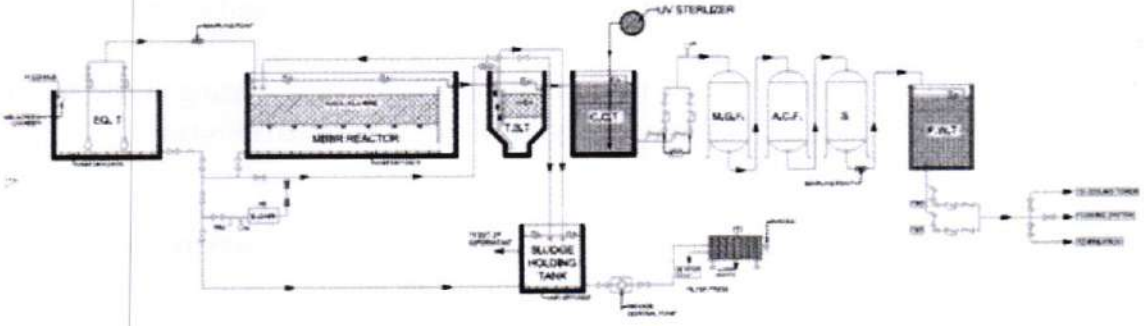


Figure 2-9: Schematic Diagrams for STP Based on MBBR Technology

2.7 POWER REQUIREMENT& BACKUP

The power shall be supplied by the State Electricity Board. The maximum load demand for the project will be approx. 12,883 KW.

Details of D.G Sets

There is provision of 2no. of DG set of total capacity 1100kVA for Commercial Facility which includes 1 x 750kVA +1x 350 kVA and 2no. of DG set of total capacity 1750 kVA for Common Services which includes 1 x 750kVA +1x 1000 kVA are proposed for power back up. The DG sets will be equipped with acoustic enclosure to minimize noise generation and adequate stack height for proper dispersion.

2.8 VEHICLE PARKING & FACILITY

Adequate provision will be made for car/vehicle parking at the project site. There shall also be adequate parking provisions for visitors so as not to disturb the traffic and allow smooth movement at the site.

For plotted development the parking shall be within the plots by the individual plot owners.

2.9 SOLID WASTE GENERATION

Solid waste would be generated both during the construction as well as operation phase. The solid waste expected to be generated during the construction phase will comprise of excavated materials, used bags, bricks, concrete, MS rods, tiles, wood, etc. which would be managed in accordance with Construction & Demolition Waste Management Rules, 2016. The following steps are proposed to be followed for the management of solid waste:

- Construction yards are proposed for storage of construction materials within site
- The excavated material such as topsoil and stones will be stacked for reuse during later stages of construction
- Top soil will be stored in temporary constructed soil bank and will be reused for landscape development and
- Remaining soil shall be utilized for refilling / road work / rising of site level at locations/ selling to authorize agency for disposal at designate sites

Following figure depicts Solid Waste Management scheme during Construction Phase of the project:

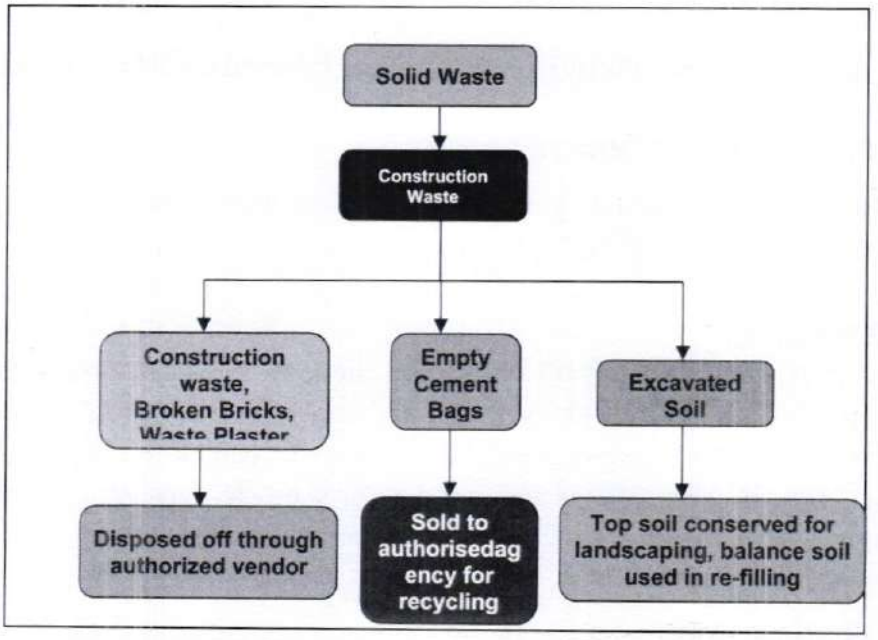


Figure 2-10 Solid Waste Management Scheme (Construction Phase)

During the operation phase, approx. 18,143 kg/day of domestic waste will be generated. Calculation for domestic solid waste is provided in table below:

Table 2-9: Daily Solid Waste Generation

S. No.	Description	Occupancy	Norms (kg/capita/day)	Waste Generated (kg/day)
1.	**Domestic Solid Waste for Residential plots**			
	• Residential plots	17316	0.5	8658
2.	**Domestic Solid Waste for Industrial plots**			
	• Industrial Plots	23035	0.25	5759
3.	Staff (Residential Maintenance, Community, Commercial, & Industrial)	2070	0.25	518
4.	Visitors(Residential, Community, Commercial, & Industrial)	19060	0.15	2,859
5.	Horticultural Waste (26 acres)	@ 0.2 kg/acre/day		5.2
6.	STP Sludge	Sludge generated x 0.35 x B.O.D difference/1000		343.434
Total Solid Waste Generation = 18,143 kg/day				

Following arrangements will be made at the site in accordance to Solid Waste Management Rules, 2016:

❖ **Collection and Segregation of waste**

1. Door to door collection system will be provided for collection of domestic waste.
2. Separate colored bins will be provided for Dry recyclable and Bio-Degradable waste.
3. Local vendor will be hired for collection and disposal of waste.
4. Litter bin will also be provided in open areas like parks etc.

❖ **Treatment of waste**

- Bio-Degradable waste

1. Bio-degradable waste will be subjected to composting by organic waste converter and the compost will be used as manure.
2. STP sludge is proposed to be used for horticultural purposes as manure.
3. Horticultural Waste is proposed to be composted and will be used for gardening purposes.

- Recyclable waste

i. Grass Recycling – The cropped grass will be spread on the green area. It will act as manure after decomposition.

ii. Recyclable waste like paper, plastic, metals etc. will be sold off to recyclers.

❖ **Disposal**

Recyclable and non-recyclable waste will be disposed of through a local agency. Solid waste management scheme is depicted in the following figure:

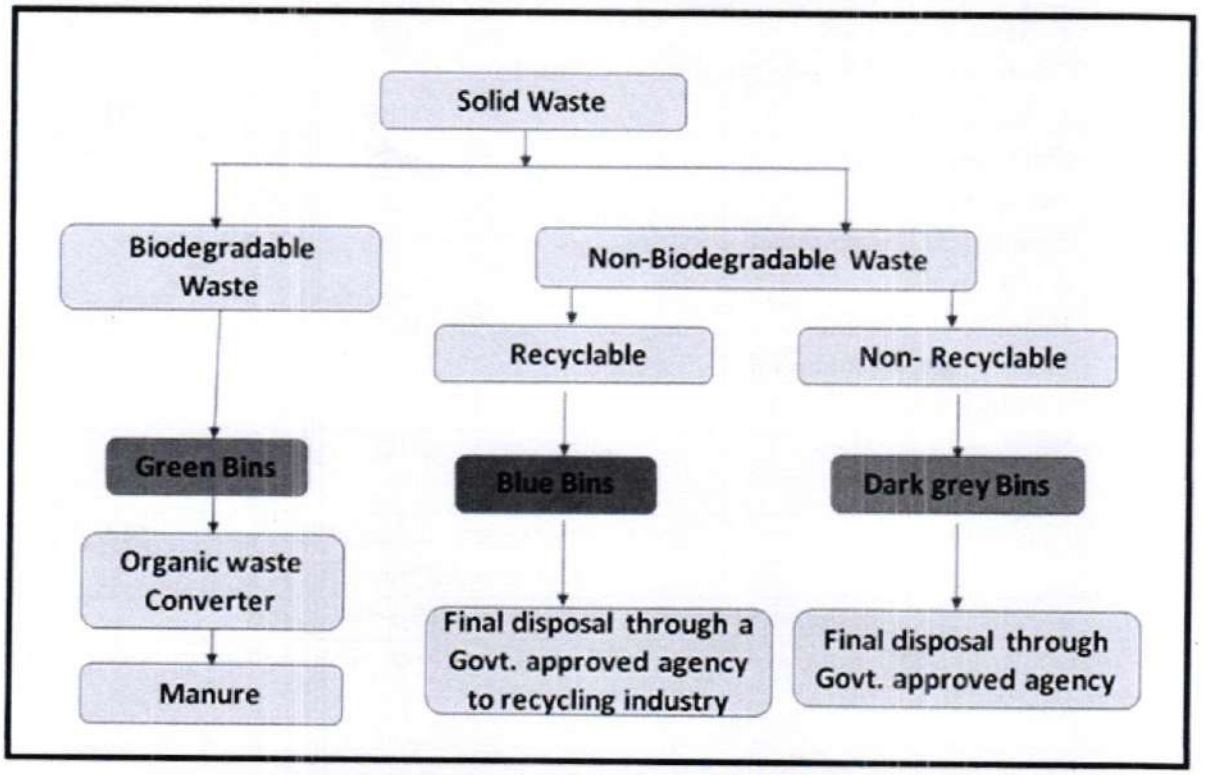


Fig. 2-11: Solid Waste Management Scheme (Operation Phase)

Organic Waste Converter

A waste converter is a machine used for the treatment and recycling of solid and liquid refuse material. A converter is a self-contained system capable of performing the following functions: pasteurization of organic waste; sterilization of pathogenic or biohazard waste; grinding and pulverization of refuse into unrecognizable output; trash compaction; dehydration.

Benefits of organic waste converter:

1. Large quantity of solid waste is converted to manure in a very short period
2. Manure can be used as compost for gardening
3. Machine requires less space, and the efficiency is high
4. Manpower and maintenance are very less
5. This is one of the latest techniques of managing biodegradable solid waste.

Organic Waste Converter - 300 (Dim. 3m × 4m) 2 machines are proposed to be used for composting waste 120kg/batch or 3000 kg/day & it requires electricity of about 13.5 HP.

No. of batches /day = 3000/120 = 25

Biodegradable Waste to be converted = 40% of total solid waste generated = 7256 kg/day

Taking 20% higher = 8707kg
No. of batches to convert 8707 kg = 8707 /120 = 73

Operation Cost-monthly per capita:

The operating cost of OWC - 300 = 1, 80,000 INR/month
Cost/day = 1, 80,000/30
= 6000/-
1 batch/day cost = 6000/25
= 240 INR
Cost for 73 batch/day = 73 × 240/-
= 17520 /-
Monthly operating cost = 30 ×17520
= INR 5, 25,600 /- per month

2.10 GREEN AREA

Total green area measures **1,05,302.64** m^2 which will include green belt, Avenue plantation and lawn.
Evergreen tall and ornamental trees have been proposed to be planted inside the premises.
No. of trees required = 1 tree/80 sq.m. of plot area =5,49,258.716/80 = 6866 Nos
No. of trees proposed to be planted = 6,870 trees.

There are few trees present at the project site which will be transplanted in the greenbelt.

As per OM dated 24.07.2024 we will plant one additional tree "EK Ped Maa Ke Naam."

2.11 RAIN WATER HARVESTING

The storm water collection system for the premises shall be self-sufficient to avoid any collection/stagnation and flooding of water. The amount of storm water run-off depends upon many factors such as intensity and duration of precipitation, characteristics of the tributary area and the time required for such flow to reach the drains. The drains shall be located near the carriageway along either side of the roads. Taking advantage of road camber, the rainfall run off from roads shall flow towards the drains. Storm water from various plots/shall be connected to adjacent drain by a pipe through catch basins. Therefore, it has been calculated to provide 65 rainwater harvesting pits at selected locations, which will catch the maximum run-off from the site.

1) Since the existing topography is congenial to surface disposal, a network of storm water pipe drains is planned adjacent to roads. All building roof water will be brought down through rainwater pipes.

2) Proposed storm water system consists of pipe drain, catch basins and seepage pits at regular intervals for rainwater harvesting and ground water recharging.
3) The peak hourly rainfall of 45 mm/hr shall be considered for designing the storm water drainage system.

Rainwater harvesting has been catered to and designed as per the guideline of CGWA. Peak hourly rainfall has been considered as 45 mm/hr. The recharge pit of 2.5m diameter and 4 m depth is constructed for recharging the water. Inside the recharge pit, a recharge bore is constructed having adequate diameter and depth. The bottom of the recharge structure will be kept 5 m above this level. At the bottom of the recharge well, a filter media is provided to avoid choking of the recharge bore. Design specifications of the rainwater harvesting plan are as follows:

- Catchments/roofs would be accessible for regular cleaning.
- The roof will have a smooth, hard and dense surface which is less likely to be damaged allowing the release of material into the water. Roof painting has been avoided since most paints contain toxic substances and may peel off.
- All gutter ends will be fitted with a wire mesh screen and a first flush device would be installed. Most of the debris carried by the water from the rooftop like leaves, plastic bags and paper pieces will get arrested by the mesh at the terrace outlet and to prevent contamination by ensuring that the runoff from the first 20 minutes of rainfall is flushed off.
- No sewage or wastewater would be admitted into the system.
- No wastewater from areas likely to have oil, grease, or other pollutants has been connected to the system.

Calculations for storm water load:

Green Area = 37,241.664m^2
Paved Area = 1,69,855.489m^2
Mean monthly rainfall for District as per IMD = 45 mm
Run-off from Green area = 105302.64 x 0.045 x 0.20
= 947.72 m^3
Run-off from Paved area = 1, 69,855.489 x 0.045 x 0.70
= 5,350.447m^3
Total runoff load from green and paved area = 947.72 + 5,350.447= **6,298.167 m^3**
Taking 20 minutes Retention Time, Total volume of storm water = 6,298.167/3
= 2,099.389 m^3
Taking the effective diameter and depth of a Recharge pit 2.5m and 4 m respectively,
Volume of a single Recharge pit = $\pi r^2 h$ = 3.14 × 1.6× 1.6× 4= 32 m^3
Hence No. of pits required = 2,099.389/32 = 65 pits
A total of 65 no. of pits proposed for artificial ground water recharge.

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CHAPTER-3 : DESCRIPTION OF THE ENVIRONMENT

3.1 INTRODUCTION

Before proceeding for baseline data generation, it is important to know the boundary limits and framework, so that the data generated can be effectively utilized for impact assessment. Baseline data of study area of 10 km radius around the project site is considered for EIA study. Impact zone for industrial actions has been classified into three parts; Core Zone (Project Site), and Buffer Zone (10 km radius from periphery of project site) as illustrated below.

Knowledge of the significance of environmental attributes is useful in selecting appropriate and judicious technique of baseline data generation, so that the generated data is rationally applied for Impact Assessment. The environmental attributes with respect to the consequences of proposed action are pointed below:

AIR ENVIRONMENT

- Determination of impact zone by screening model and developing ambient air quality monitoring network
- Monitoring and analysis of the pollutants as per prescribed procedures within the impacted zone
- Monitoring the site-specific meteorological data
- Estimation of quantities of point source emissions from the proposed actions based on engineering details
- Estimation of quantities of fugitive emissions from the proposed actions and projected emissions from the vehicular traffic
- Prediction of changes in the ambient air quality due to air emissions by following the Guidelines developed by Central Pollution Control Board (PROBES/70/1997-98)
- Evaluation of the adequacy of the proposed air pollution control measures to meet the national standards
- Assessment of impacts of air pollution on historical, cultural and archaeological sites within the impact zone
- Recommendation of air pollution mitigation measures at source, pathways and receptors

NOISE ENVIRONMENT

- Monitoring the present status of noise levels within the impact zone by following standard procedures
- Estimation of noise levels from the proposed actions based on engineering details
- Prediction of changes in the ambient noise quality due to the actions by following noise prediction models

- Evaluation of the adequacy of the proposed noise pollution control measures to meet the national standards
- Recommendation of noise mitigation measures at source, pathways and receptors

WATER ENVIRONMENT

- Study of existing surface water and groundwater resources within the impact zone of the action with respect to quality and quantity as per Primary and Biological Water Quality Criteria developed by CPCB and Drinking Water Quality Standards prescribed by Bureau of Indian Standards
- Prediction of changes in the water quality due to the effluent discharge into water bodies from proposed actions by following water quality prediction models
- Evaluation of the adequacy of the proposed water pollution control measures, wastewater treatment system and other water conservation measures, like recycling and reuse, to meet the various water quality criteria
- Recommendation of water pollution mitigation measures at source, pathways and receptors

BIOLOGICAL ENVIRONMENT

- Survey of terrestrial and aquatic flora and fauna present within the impact zone clearly delineating season and duration
- Assessment of potential damage to terrestrial and aquatic flora and fauna due to the discharge of air and water pollutants and due to landuse and landscape changes
- Recommendation of mitigation measures at source, pathways and receptors to reduce and I or prevent the damage.

LAND ENVIRONMENT

- Survey of existing landuse and topography, geology and hydrogeology, landscape and drainage pattern within the impact zone
- Estimation of impacts of the action on landuse and topography, geology and hydrogeology landscape and drainage pattern within the impact zones
- Qualitative and quantitative characterizations of solid and hazardous wastes and delineation of solid waste management options for minimization of waste, reuse of waste and environment friendly disposal practices
- Study of soil characteristics of the impact zone and impact on it due to the action
- Identification of potential utility of treated wastewater in land application and subsequent impacts
- Identification of land suitable for solid and hazardous waste disposal and subsequent impacts.

3.2 STUDY PERIOD

The standard ToR application was submitted on 10.09.2024 at MoEFCC, New Delhi vide Proposal No- SIA/HR/INFRA2/494250/2024 and the Standard ToR letter was issued by SEAC Haryana on 10.09.2024 vide ToR identification No – TO24B3813HR5427969N.

Accordingly, the baseline environmental study has been done for the period 1st December, 2023 to 29th February, 2024, as well as secondary data also collected from different sources. Baseline data has been collected by M/s GRC India Training & Analytical Laboratory, Noida {NABL Accredited Lab, Certificate No. TC - 7501 & MOEFCC No. S.O. 388 (E) (Certificate enclosed as **Annexure II**)}.

The impact identification always commences with the collection of baseline data such as Ambient Air Quality, Micro-Meteorology, Ground and Surface Water Quality, Noise levels, Soil Quality, Land use pattern, Biological Environment and Socio-economic aspects, Solid and Hazardous waste, Risk Assessment, Geology and Hydrology within the study zone of 10 km radius.

3.3 ESTABLISHMENT OF BASELINE FOR VALUED ENVIRONMENTAL COMPONENTS, AS IDENTIFIED IN THE SCOPE

3.3.1 Meteorological Data

Assessment of the micro and macro meteorology is important from the standpoint of understanding the nature and extent of air pollution in the study area. Climate has an important role in the build-up of pollution levels. The climatic condition of the area may be classified as moderately or seasonally dry, tropical or temperate savanna climate with four seasons in a year. Winter is critical for air pollution build-up because of frequent calm conditions with temperature inversions resulting in poor atmospheric mixing, natural ventilation and high emission loads.

The metrological station was set-up at the project site and baseline data was collected which are reproduced as under:

3.3.2 Climate Condition

The meteorological data recorded during the monitoring period is very useful for proper interpretation of the baseline information as well as for input prediction models for air quality dispersion. A meteorological station equipped with continuous monitoring equipment was installed on at project site, at a height 10 m above ground level to record wind speed, wind direction, relative humidity and temperature.

3.3.3 Regional Meteorology

Historical data on meteorological parameters will play an important role in identifying the general meteorological will also play an important role in identifying the general meteorological regime of the region. The district received an average annual rainfall of 1635 cum. Period from June to September is well known for monsoon. The monthly rainfall data shows that 85% of rainfall comes during monsoon period.

The year broadly is divided into four seasons:-

- Winter season : December to February
- Pre – Monsoon : March to May
- Monsoon Season : June to September
- Post – monsoon : October to December

3.3.4 Wind

Regional meteorological scenario helps to understand the trends of the climatic factors. It also helps in determining the sampling stations and in predicting the post project environmental scenario. Meteorological scenario exerts a critical influence on Air Quality as the pollution arises from the interaction of atmospheric contaminants with adverse meteorological conditions such as temperature inversions, atmospheric stability and topographical features like hills, and valleys.

The critical weather elements that influence air pollution are wind speed, wind direction, temperature, which together determines atmosphere stability. Hence it is an indispensable part of any air pollution studies and required for interpretation of base line information. Wind speed and direction data recorded during the study period is useful in identifying the influence of meteorology on the air quality of the area.

3.3.5 Wind Rose

The meteorological data was collected at the site by installing an automatic weather station during Winter season (Dec, 2023 to Feb 2024). Due care was taken in establishing the monitoring station to ensure free flow of winds without any obstructions.

Wind Speed, Wind Direction, Temperature and Relative Humidity were recorded for the total study period. The data on wind patterns are pictorially represented by means of wind rose diagrams for study period 1st December, 2023 to 29th February, 2024. Wind rose from collected data was compared with IMD data based wind rose, which is shown in **Figure 3-1.**

The metrological data reflecting minimum, maximum temperature in °C, relative humidity in %, rainfall in mm/hr, wind speed in m/s, for the year 2024 has been appended as **Table-3-1.**

Monitoring is carried out using Respirable& Fine Dust Sampler with attachment for gaseous sampling.

Selections of ambient air quality monitoring stations - Ambient air quality monitoring stations are selected within the impact zone by knowing the upwind and downwind direction (obtained from IMD and previous EIA reports and screen modeling technique). Logistics for operating the instrument like accessibility, electricity connection, security and safety of instruments etc. is another main factor that is used to locate the station. Sampler is not operated using petrol/ diesel Generator Sets and not located on ground or along the road-side. The three broad criteria for selection of ambient air quality monitoring stations are given below.

- **Sampling Height -** Sampler should be located 3 m to 5 m height from ground level
- **Sampling Location** - Sampler should be located >500 m distance from the roads
- **Aerial Clearance** - Minimum clearance satisfactory for sampling is 270°.There should be no high rise structures above the sampler height, like tall trees, tall buildings, hordings or other high obstructions around the sampler (in a circle of 500 m radius)

Eight Ambient Air Quality Monitoring stations were located in the impact area during Winter season (1st December 2023 to 29th February 2024). Standard procedures and frequency prescribed by CPCB were used. The monitoring locations are shown below **Table 3-2.** The summary of AAQ results is shown in **Table 3-3.**

Table 3-1 Techniques Used For Air Quality Monitoring

Parameter	Technique	Technical Protocol	Detectable Limit
Fine Particulate Matter ($PM_{2.5}$)	Gravimetric Method	CPCB	5 $\mu g/m^3$
Respirable Particulate Matter (PM10)	Gravimetric Method	CPCB	5 $\mu g/m^3$
Sulphur Dioxide (SO_2)	West & Geake Method	IS:5182(P2)	4.0 $\mu g/m^3$
Oxides of Nitrogen (NO_2)	Jacob & Hochheisser	IS:5182(P6)	9.0 $\mu g/m^3$
Carbon Monoxide (CO)	Gas Chromatography	IS:5182(P-10)	100 $\mu g/m^3$

3.4.2 Methodology adopted for the study

The baseline status of the ambient air has been established through a scientifically designed ambient air quality monitoring network. The following criteria were taken into account during selection of the sampling stations:

- Topography of the area
- Human settlements within the study area

- Safety, accessibility and non-interference with general routine of the people residing near the station
- Prediction of maximum concentration of the air pollutants through dispersion modeling for the proposed source details using prevailing meteorological conditions in the region

Table 3-2 Ambient Air Sampling Stations

Code	Location	Description	Distance & Direction from Plant	Latitude /Longitude
AAQ-1	Project Site	Centre	0 km	28° 14' 54.426" N 76° 49' 15.1E
AAQ-2	Bharat Petroleum Petrol Pump, Akerabhiwadi	Upwind	Approx 1.3 km, SE	28° 13' 56.477" N 76° 50' 22.8"E
AAQ-3	Downtown, Palasoli	Down Wind	Approx 2.2 km, NW	28° 15' 35.973" N 76° 47' 55.6" E
AAQ-4	Indraprastha Gas Limited CNG Station, Malpura	Crosswind	Approx 2.5 km, SW	28° 13' 38.848" N 76° 48' 4.47" E
AAQ-5	Near BMU D Block crossing	Downwind	Approx 0.6 km, NW	28°14'55.45"N 76°48'39.86"E

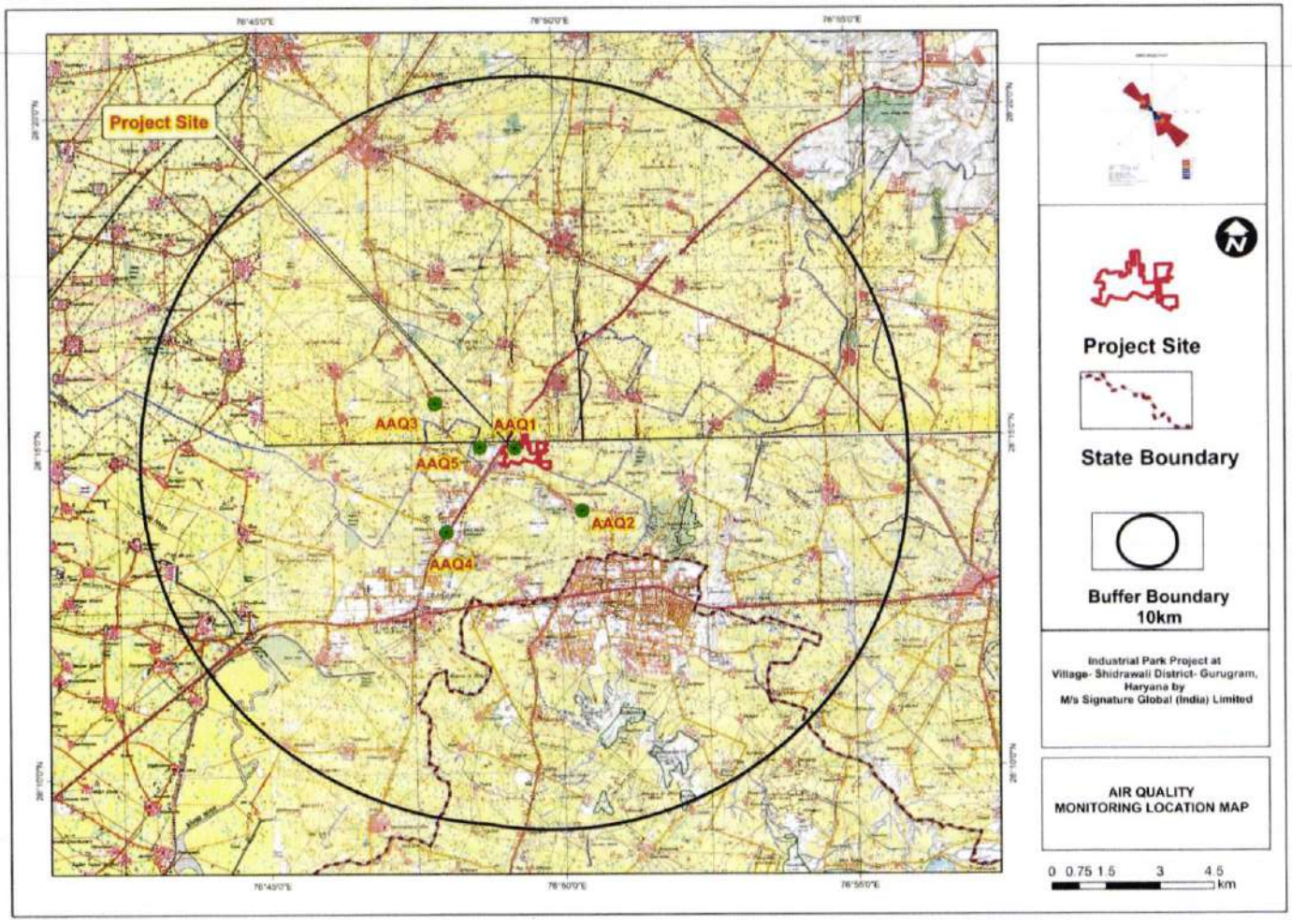


Figure 3-2 Ambient Air Quality Monitoring Location Map

3.4.3 Ambient Air Quality of Study Area

The ambient air quality data is presented in following tables and the analysis reports are attached as **Annexure.**

Table 3-3 Summary of Ambient Air Quality Concentration in the Study Area (1st Dec 2023 to 29th Feb, 2024)

Parameters	PM_{10} (µg/m³)	$PM_{2.5}$ (µg/m³)	SO_2 (µg/m³)	NO_2 (µg/m³)	CO (µg/m³)
AAQM Norms	**100**	**60**	**80**	**80**	**4000**
Project Site					
Min	151.5	78.3	8.6	30.3	710.0
Max	183.7	97.6	11.1	49.7	1030.0
Mean	167.2	87.4	9.7	42.0	903.8
98 Percentile	182.3	97.2	11.0	49.4	1030.0
Bharat Petroleum Petrol Pump, Akerabhiwadi					
Min	117.2	59.7	8.2	26.3	470
Max	145.1	73.9	9.9	35.1	830
Mean	129.8	67.7	9.0	30.5	701
98 Percentile	142.8	73.8	9.9	35.0	830
Downtown, Palasoli					
Min	138.7	68.0	8.2	29.9	450.0
Max	173.2	85.5	10.7	48.6	810.0
Mean	156.2	76.1	9.3	41.6	654.6
98 Percentile	171.9	85.3	10.6	48.6	796.2
Indraprastha Gas Limited CNG Station, Malpura					
Min	147.2	82.5	9.4	32.4	750.0
Max	186.5	103.7	12.7	50.1	1030.0
Mean	165.8	91.3	11.2	43.1	912.1
98 Percentile	185.7	102.7	12.6	50.1	1030.0
Near BMU D Block crossing					
Min	140.7	64.2	9.6	32.9	680.0
Max	174.3	83.4	12.3	41.6	940.0
Mean	155.9	72.6	11.1	36.7	765.4
98 Percentile	170.6	81.5	12.3	41.2	935.4

3.4.4 OBSERVATIONS

Ambient Air Quality Monitoring reveals that the minimum and maximum concentrations of $PM_{2.5}$ for all the 05 AAQM stations were found to be 59.7 µg/m³ to 103.7 µg/m³ respectively, while for PM_{10} it varies between 117.2 µg/m³ to 183.7 µg/m³.

As far as the gaseous pollutants SO_2 and NO_2 are concerned, the prescribed CPCB limit of 80 µg/m³ for residential, rural and industrial areas has never surpassed at any station. The minimum and maximum concentrations of SO_2 were found to be 8.2 µg/m³ to 12.7 µg/m³

respectively. The minimum and maximum concentrations of NO_2 were found to be 26.3 $\mu g/m^3$ to 50.1 $\mu g/m^3$ respectively. Also, the minimum and maximum concentrations of CO were found to be 450$\mu g/m^3$ to 1030$\mu g/m^3$ respectively.

High concentration of $PM_{2.5}$ and PM_{10} may be attributed to Vehicular emission and nearby construction activities in the area.

3.5 NOISE ENVIRONMENT

The proposed project is the Industrial Park Project and hence requires movement of raw materials, products, fuels, tools & tackles required for its construction process and also transportation of products to its destination. The movement of personnel from their residence to industry would also result in a moderate increase in the traffic, which would not result in any drastic change in the existing traffic pattern or noise levels of the area. Background noise levels were measured using integrated sound level meter in 05 locations.

Table 3-4 Noise Monitoring Locations were located within the study area

Code	Location	Description	Direction and Distance	Latitude/Longitude
NQ-1	Project Site	Commercial Area	0 km	28° 14' 54.426" N 76° 49' 15.1E
NQ-2	Bharat Petroleum Petrol Pump, Akerabhiwadi	Commercial Area	Approx 1.3 km, SE	28° 13' 56.477" N 76° 50' 22.8E
NQ-3	Downtown, Palasoli	Residential Area	Approx 2.2 km, NW	28° 15' 35.973" N 76° 47' 55.6 E
NQ-4	Indraprastha Gas Limited CNG Station, Malpura	Commercial Area	Approx 2.5 km, SW	28° 13' 38.848" N 76° 48' 4.47 E
NQ-5	Samrat hotel, Bilaspur NH 8, Rathiwas mod	Commercial Area	Approx 3.2 km, NE	28° 16' 31.587" N 76° 50' 38.3E

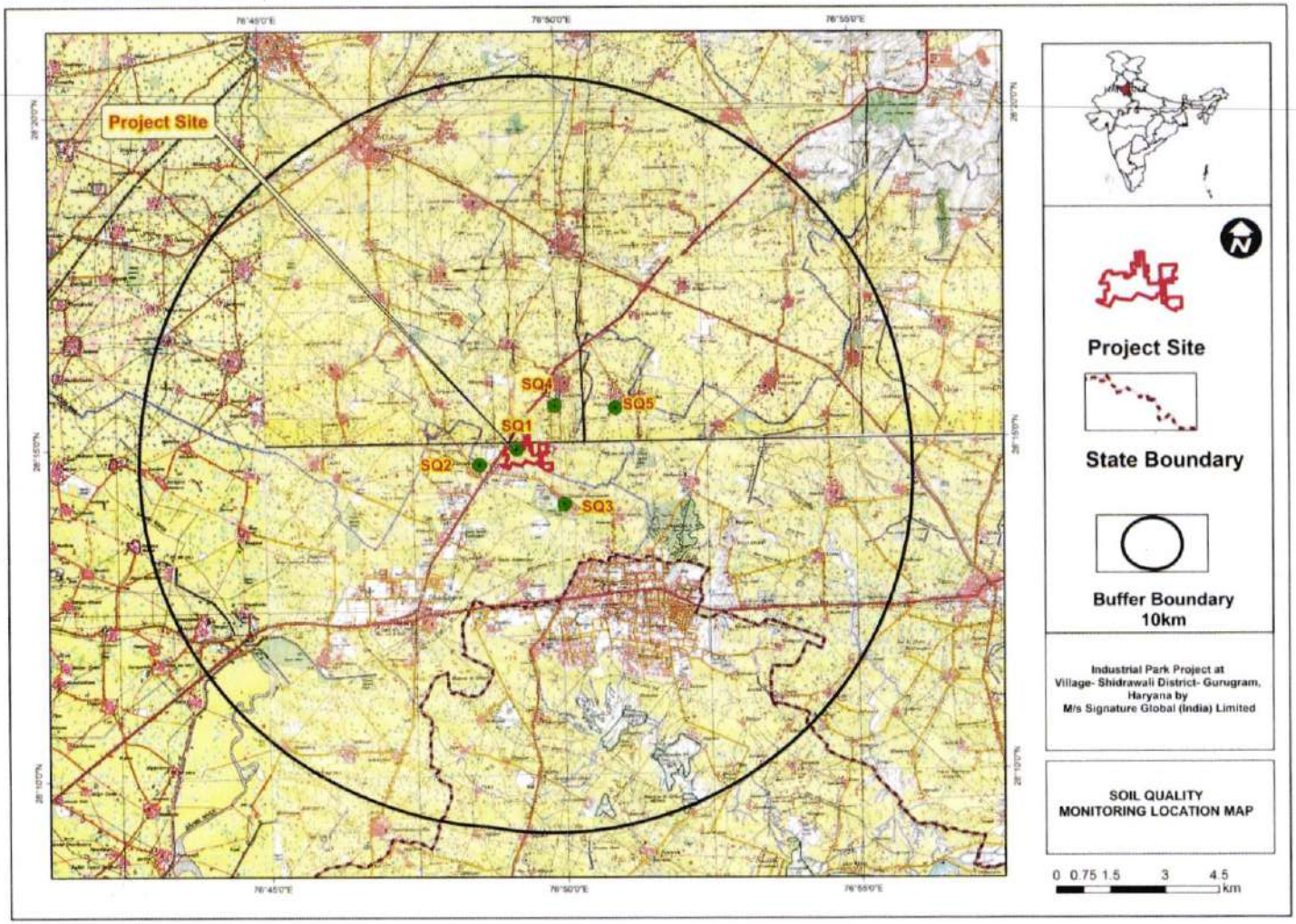


Figure 3-3 Ambient Noise Quality Monitoring Locations

3.5.1 Observations

The baseline noise levels have been monitored at different locations as indicated in Table **3.6** and graphical representation is given in **Figure-3.5**. In rural areas wind blowing and chirping of birds would contribute to noise levels especially during the nights. Assessment of day noise levels around the study area range between 50.5 to 63.6dB(A) during study period whereas the night equivalents were in the range of 42.7 to 52.9 dB (A).

Day and Night equivalents were within the Ambient Noise standards.

Noise Report is attached as **Annexure III.**

Table 3-5 Noise Levels in Study Area

Noise Quality data (DEC-2023)						
S. No.	**Locations**	**ZONE**	**LIMIT as per CPCB Guidelines Leq, dB(A)**		**Observed value Leq, dB(A)**	
			DAY*	**NIGHT****	**DAY***	**NIGHT***
1	Project Site	Commercial Area	65	55	56.8	47.3
2	Bharat Petroleum Petrol Pump, Akerabhiwadi	Commercial Area	65	55	50.5	42.7
3	Downtown Palasoli	Residential Area	55	45	53.2	43.5
4	Indraprastha Gas Limited CNG Station, Malpura	Commercial Area	65	55	63.6	52.9
5	Samrat Hotel, Bilaspur NH-8 Rathiwas Mod	Commercial Area	65	55	60.9	50.5
*	Day time (6.00AM TO 10.00PM)					
**	Nighttime (10.00PM TO 6.00AM)					

3.6 WATER ENVIRONMENT

3.6.1 Reconnaissance Survey

The impact has been assessed on randomly selected surface and ground water sources falling within the impact zone. In order to assess the existing water quality, the water samples were collected from ten different locations within the study area and analyzed as per the procedure specified in standard methods for examination of water and wastewater published by American Public Health Association and Bureau of Indian Standards (APHA/BIS).

Selected water quality parameters for water resources of the study area have been used for describing the water environment and assessing the impacts on it. To assess the water quality impacts, water resources in the impact area have been grouped into 2 classes.

- Ground water resources in the deeper strata of the ground.
- Surface water resources

About 5 ground water and 5 surface water samples were collected from the study area to assess the water quality during the study period. The ground water samples were drawn from the hand pumps and open wells being used by the villagers for their domestic needs. Surface water sampling was carried out from Indori nala, Sahibi river and Untwan village pond within 10 km of the proposed project site.

The details of the locations are given in **Table 3-6** & Lab reports are attached as **Annexure-III.**

Table 3-6 Water Sampling Locations (Surface & Ground Water)

Code	Location	Distance from site (Km)	Direction	Latitude	Longitude
	Ground Water				
GW-1	Near Project Site	0 km	Centre	28°14'54.74"N	76°49'15.44"E
GW-2	Borewell Village Kapriwas	Approx. 0.6 km	W	28°14'40.88"N	76°48'37.63"E
GW-3	Borewell Village Gurjar Ghatal	Approx. 0.9 km	SE	28°14'4.46"N	76°50'3.13"E
GW-4	Borewell Village Sidhrawali	Approx. 1 km	N	28°15'33.36"N	76°49'55.20"E
GW5	Borewell Village Rathiwas	Approx. 2 km	NE	28°15'30.82"N	76°50'56.94"E
	Surface Water				
SW-1	Indori nala u/s	Approx. 2.8 km	N	28° 16' 29.251" N	76° 48' 56.095" E
SW-2	Indori nala d/s	Approx. 2.9 km	NE	28° 15' 34.801" N	76° 51' 13.415" E
SW-3	Sahibi river u/s	Approx. 8.7 km	SW	28° 12' 1.691" N	76° 44' 36.184" E
SW-4	Sahibi river d/s	Approx. 8.8 km	SW	28° 11' 30.345" N	76° 45' 7.498" E
SW-5	Untwan village pond	Approx. 4.6 km	E	28° 15' 4.792" N	76° 52' 35.990" E

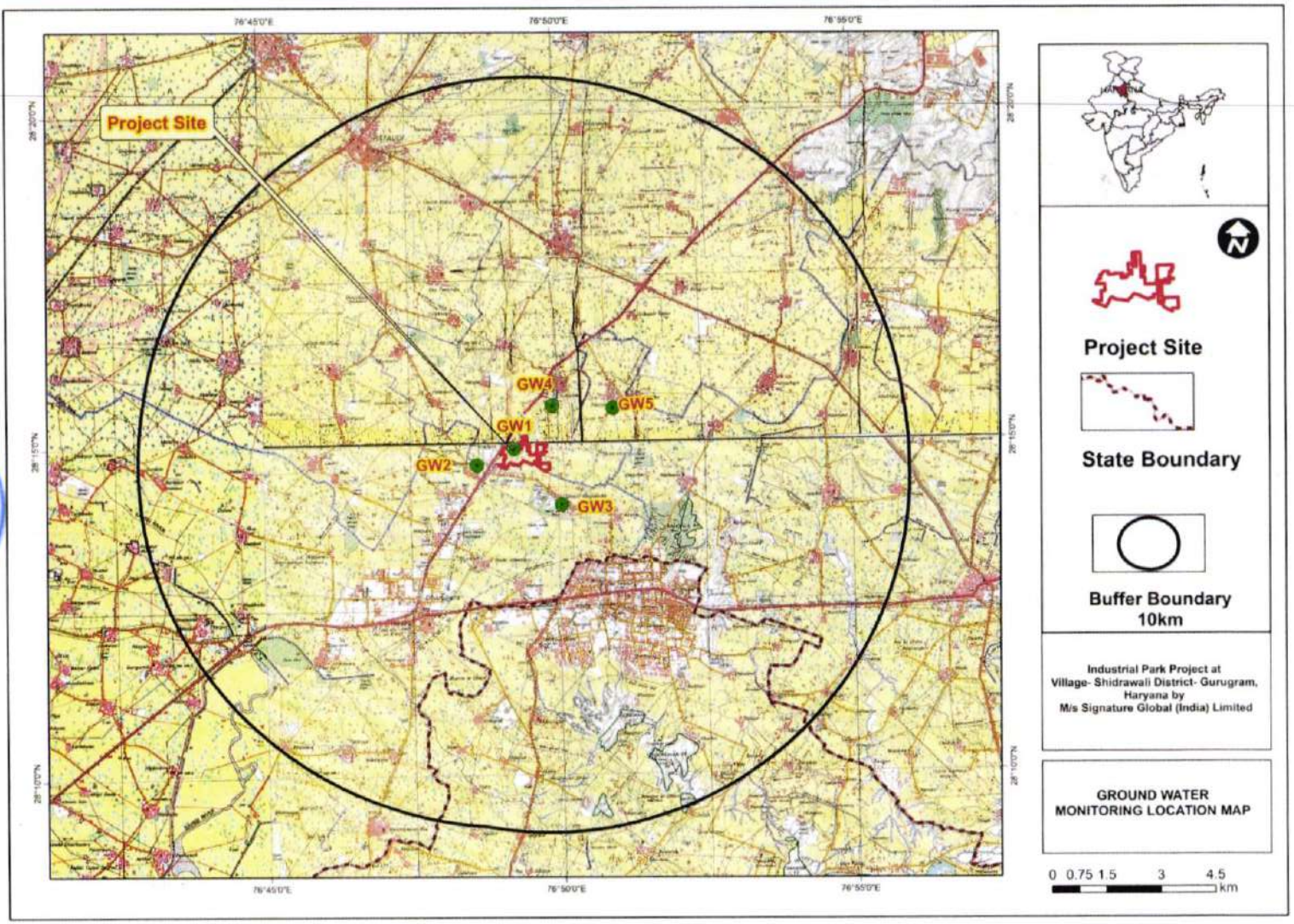


Figure 3-4 Ground Water Sampling Locations

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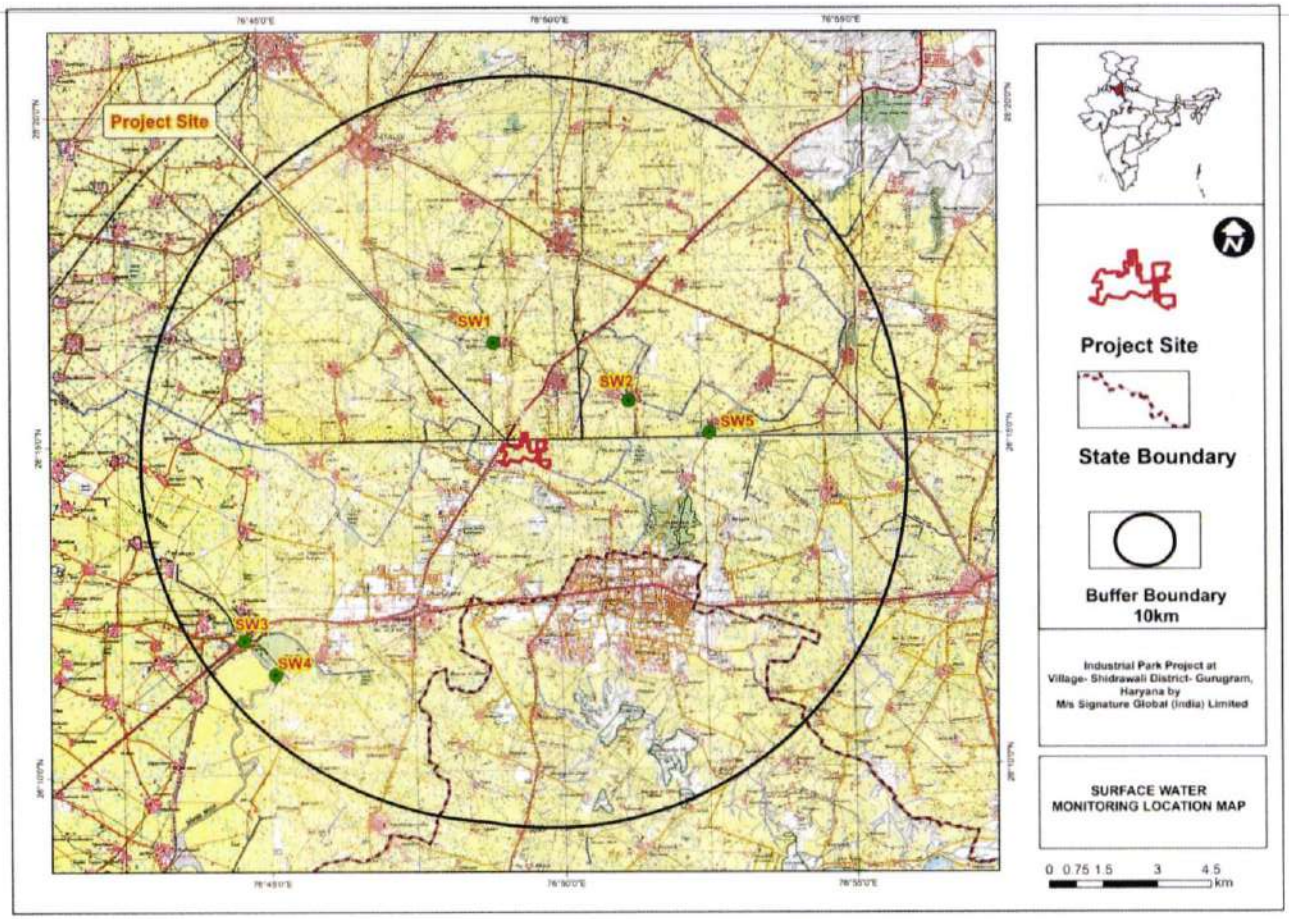


Figure 3-5 Surface Water Quality Monitoring Locations

Table 3-7 Water Quality Analysis Result (Ground Water Dec -2023)

S.No	Parameter	Unit	Standard Limit (IS-10500:2012, RA 2018)		GW-1	GW-2	GW-3	GW-4	GW-5
			Desirable Limit	Permissible Limit	Near Project Site	Borewell Village Kapriwas	Borewell Village Gurjar Ghatal	Borewell Village Sidhrawali	Borewell Village Rathiwas
1	Colour	Hazen	5	15	<5	<5	<5	<5	<5
2	Odour	-	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
3	Turbidity	NTU	1	5	<1	<1	<1	<1	<1
4	pH	-	6.5-8.5	No Relaxation	7.88	7.93	7.89	7.92	7.89
5	Total Dissolved Solids (TDS)	mg/l	500	2000	1420	1450	1440	1480	1580
6	Total Hardness (as CaCO3)	mg/l	200	600	413	447	458	439	466
7	Total Alkalinity (as CaCO3)	mg/l	200	600	426	478	487	467	487
8	Chlorides (as Cl)	mg/l	250	1000	343	330	335	363	378
9	Fluoride (as F)	mg/l	1	1.5	0.7	0.6	0.5	0.7	0.06
10	Calcium(as Ca2+)	mg/l	75	200	100	107	110	105	112
11	Magnesium (as Mg2+)	mg/l	30	100	40	43	44	42	45
12	Sulphate (as SO4)	mg/l	200	400	160	154	136	146	170
13	Nitrate(as NO3)	mg/l	45	No Relaxation	18	20	19	21	17
14	Iron (as Fe)	mg/l	1	No Relaxation	0.68	0.56	0.63	0.54	0.49
15	Aluminum (as Al)	mg/l	0.03	0.2	<0.01	<0.01	<0.01	<0.01	<0.01

16	Copper (as Cu)	mg/l	0.05	1.5	<0.01	<0.01	<0.01	<0.01	<0.01
17	Manganese (as Mn)	mg/l	0.1	0.3	<0.01	<0.01	<0.01	<0..1	<0.01
18	Boron (as B)	mg/l	0.5	1	<0.01	<0.01	<0.01	<0.01	<0.01
19	Zinc (as Zn)	mg/l	5	15	<0.01	<0.01	<0.01	<0.01	<0.01
20	Selenium (as Se)	mg/l	0.01	No Relaxation	<0.01	<0.01	<0.01	<0.01	<0.01
21	Arsenic (as As)	mg/l	0.01	0.05	<0.01	<0.01	<0.01	<0.01	<0.01
22	Cadmium (as Cd)	mg/l	0.003	No Relaxation	<0.001	<0.001	<0.001	<0.001	<0.001
23	Total Chromium (as Cr3+)	mg/l	0.05	No Relaxation	<0.01	<0.01	<0.01	<0.01	<0.01
24	Cyanide (as CN)	mg/l	0.05	No Relaxation	<0.01	<0.01	<0.01	<0.01	<0.01
25	Lead (as Pb)	mg/l	0.01	No Relaxation	<0.01	<0.01	<0.01	<0.01	<0.01
26	Mercury (as Hg)	mg/l	0.001	No Relaxation	<0.001	<0.001	<0.001	<0.001	<0.001
27	Nickel (as Ni)	mg/l	0.02	No Relaxation	<0.01	<0.01	<0.01	<0.01	<0.01
28	Phenolic Compounds (as C6H5OH)	mg/l	0.001	0.002	<0.001	<0.001	<0.001	<0.001	<0.001
29	Anionic Detergent (as MBAS)	mg/l	0.2	1	<0.01	<0.01	<0.01	<0.01	<0.01
30	Silica (as SiO_2)	mg/l	,---	,---	5.4	5.1	5.3	4.8	5.7
31	Phosphate (as PO_4)	mg/l	,---	,---	1.1	1.3	1.1	1.3	1.2
32	Specific Conductivity	µS/cm	,---	,---	2130	2170	2150	2220	2360
Bacteriological Parameter									
1	Total Coliform	MPN/100ml	Shall not be detectable in any 100ml Sample		Not Detected (<2)	Not Detected (<2)	Not Detected	Not Detected	Not Detected

						(<2)	(<2)	(<2)
2	E.coli	MPN /100ml	Shall not be detectable in any 100ml Sample	Absent (<2)	Absent (<2)	Absent (<2)	Absent (<2)	Absent (<2)

Table 3-8 Water Quality Analysis Result

SURFACE WATER QUALITY STUDY (Dec 2023)							
S.No.	**Parameter**	**Unit**	**S.W.1**	**S.W.2**	**S.W.3**	**S.W.4**	**S.W.5**
			Indori Nala Upstream	**Indori Nala Downstream**	**Sahibi River Upstream**	**Sahibi River Downstream**	**Untwan Village Pond**
1.	Color	Hazen	6	7	7	8	5
2.	Turbidity	NTU	18	24	44	56	23
3.	Temperature	^{0}C	18.7	19.1	18.7	19.3	19.7
	pH Value	-	7.75	7.78	7.43	8.2	8
5.	Dissolved Oxygen	mg/l	3.8	3.2	1.2	1	5.2
6.	Biochemical Oxygen Demand (BOD) 3 Days at 27^{0}C	mg/l	8.3	8.6	20.4	26.2	6.8
7.	Chemical Oxygen Demand	mg/l	22.8	24.5	62.4	76.4	22.4
8.	Total Dissolved Solids	mg/l	940	950	1200	1350	720
9.	Total Hardness (as $CaCO_3$)	mg/l	367	370	380	410	240
10.	Total Alkalinity (as $CaCO_3$)	mg/l	460	463	360	390	230
11.	Chlorides (as Cl)	mg/l	138	140	280	320	160
12.	Fluoride (as F)	mg/l	0.7	0.7	0.8	0.9	0.7
13.	Calcium (as Ca^{2+})	mg/l	88	89	91	98	58
14.	Magnesium (as Mg^{2+})	mg/l	35	36	36	40	23
15.	Sodium (as Na^{+})	mg/l	190	192	218	245	169
16.	Potassium (as K^{+})	mg/l	20.4	22.5	25.6	28.4	18.6

17.	Sulphate (as SO_4)	mg/l	110	113	180	210	106
18.	Total Kjeldahl Nitrogen (as N)	mg/l	3.8	4.2	5.2	6.5	2.4
19.	Free Ammonia (as NH_3)	mg/l	1.3	1.6	1.9	2.4	1.3
20.	Nitrate (as NO_3)	mg/l	12.6	12.8	24	26	13.3
21.	Silica (as SiO_2)	mg/l	19	22	9.2	9.3	7.5
22.	Phosphate (as PO_4)	mg/l	1.7	2.2	2.8	3.2	1.6
23.	Iron (as Fe)	mg/l	0.87	0.89	0.53	0.56	0.59
24.	Aluminum (as Al)	mg/l	<0.01	<0.01	<0.01	<0.01	<0.01
25.	Boron (as B)	mg/l	<0.01	<0.01	<0.01	<0.01	<0.01
26.	Copper (as Cu)	mg/l	<0.01	<0.01	<0.01	<0.01	<0.01
27.	Manganese (as Mn)	mg/l	<0.01	<0.01	<0.01	<0.01	<0.01
28.	Zinc (as Zn)	mg/l	<0.01	<0.01	<0.01	<0.01	<0.01
29.	Selenium (as Se)	mg/l	<0.01	<0.01	<0.01	<0.01	<0.01
30.	Arsenic (as As)	mg/l	<0.01	<0.01	<0.01	<0.01	<0.01
31.	Cadmium (as Cd)	mg/l	<0.001	<0.001	<0.001	<0.001	<0.001
32.	Total Chromium (as Cr^{3+})	mg/l	<0.01	<0.01	<0.01	<0.01	<0.01
33.	Cyanide (as CN)	mg/l	<0.01	<0.01	<0.01	<0.01	<0.01
34.	Lead (as Pb)	mg/l	0.06	0.07	<0.01	<0.01	<0.01
35.	Mercury (as Hg)	mg/l	<0.001	<0.001	<0.001	<0.001	<0.001
36.	Nickel (as Ni)	mg/l	<0.01	<0.01	<0.01	<0.01	<0.01
37.	Total Suspended Solids	mg/l	38.2	39.6	180	220	40
38.	Sodium Adsorption Ratio	-	3.1	3.2	4.3	4.8	3.2
39.	Phenolic Compounds (as C_6H_5OH)	mg/l	0.06	0.07	<0.001	<0.001	0.002
40.	Anionic Detergent (as MBAS)	mg/l	0.07	0.08	<0.01	<0.01	0.03
41.	Specific Conductivity	µS/cm	1410	1425	1790	2025	1075

42.	Total Coliform	MPN/100ml	1600	1600	1600	1600	840
43.	Faecal Coliform	MPN/100ml	1600	1600	1600	1600	380



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3.6.2 Observations

Analysis of results of ground water is as follows;

- pH varies from to 7.88 to 7.93.
- Total Hardness varies from 413 to 466 mg/L.
- Total Dissolved Solids varies from 1420 to 1580 mg/L.

Review of the ground water quality results indicate that there is some variation in chemical composition of water tapped from different sources and the ground water from all sources remains suitable for drinking purposes as all the constituents are within the limits prescribed for drinking water standards promulgated by Indian Standards (IS: 10500).

Analysis of results of surface water is as follows;

- pH varies from to 7.75 to 8.2
- Dissolved Oxygen varies from 1 to 5.2 mg/L
- COD varies from 22.4 to 76.4 mg/L.

Review of the surface water quality results indicate that all the parameters are within the limits specified in Surface Water Standard IS: 2296. With regard to heavy metals, except Arsenic, Mercury, Nickel and Cadmium, all the others were not traceable.

3.7 SOIL ENVIRONMENT

Soil of the Gurugram district are classified as tropical and brown soil, existing in the North Western extreme, Northern and North Eastern parts of the district and water logged and salt affected soils in the Southern parts of the district. The soil are medium textured loamy sand is the average texture in Gurugram and Sohna blocks.

3.7.1 Soil Quality

The present study on soil quality establishes the baseline characteristics in the study area surrounding the project site. The study has been addressed with the following objectives.

- To determine the base line characteristics
- To determine the soil characteristics of proposed project site
- To determine the impact of industrialization/urbanization on soil characteristics
- To determine the impacts on soils from agricultural productivity point of view

3.7.2 Criteria Adopted for Selection of Sampling Locations

For studying the soil types and soil characteristics, five sampling locations were selected to assess the existing soil conditions representing various land use conditions and geological features.

3.7.3 Methodology and Sampling

The homogenized soil samples collected at different locations were packed in a polyethylene plastic bag and sealed. The sealed samples were sent to laboratory for analysis. The physical, chemical parameter concentrations were determined from all samples.

3.7.4 Soil Sampling Locations

Details of the soil sampling locations are given in **Table 3-9.**

Table 3-9 Soil Sampling Location

Code	Location	Distance & Direction from Project Site	Latitude	Longitude
SQ-1	Project Site	0 km	28°14'54.74"N	76°49'15.44"E
SQ-2	NON-Agricultural Land Village Kapriwas	Approx. 0.6 km, W	28°14'40.88"N	76°48'37.63"E
SQ-3	NON-Agricultural Land Village Gurjar Ghatal	Approx. 0.9km, SE	28°14'4.46"N	76°50'3.13"E
SQ-4	Agricultural Land Village Sidhrawali	Approx. 1 km, N	28°15'33.36"N	76°49'55.20"E
SQ-5	Agricultural Land Village Rathiwas	Approx. 2 km, NE	28°15'30.82"N	76°50'56.94"E

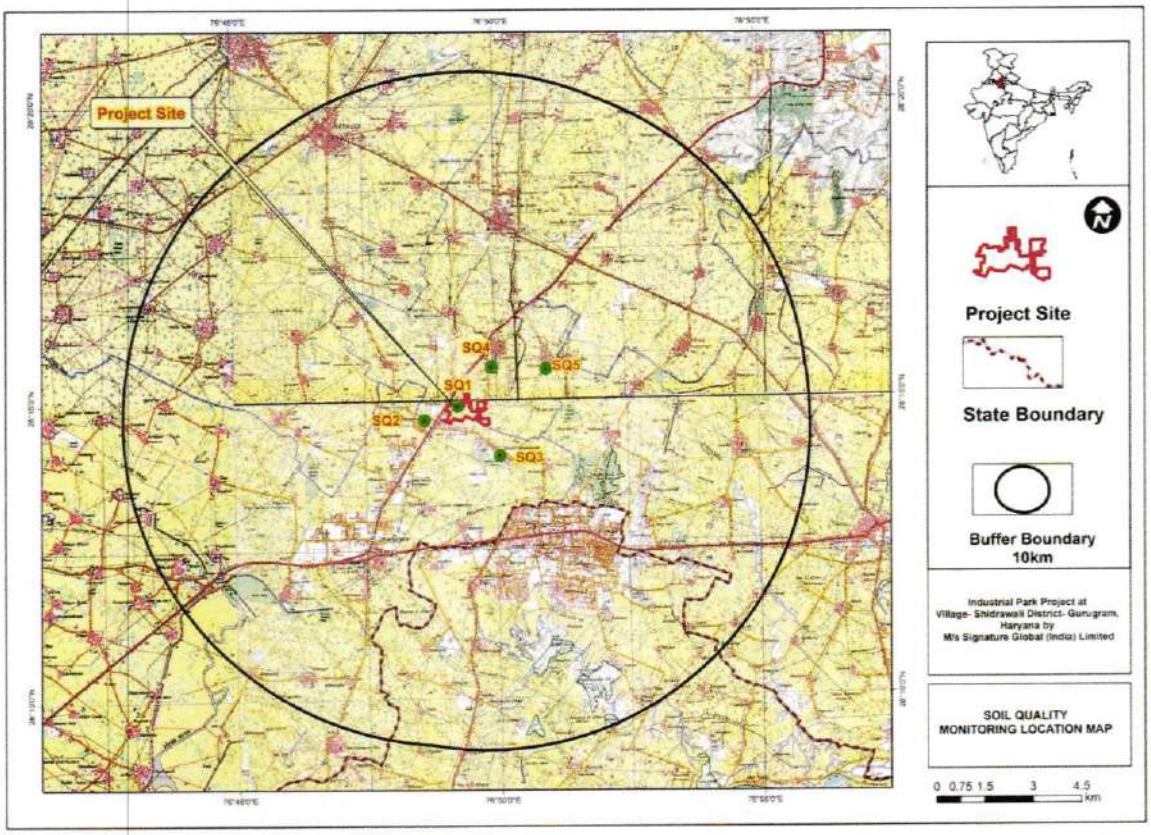


Figure 3-6 : Soil Monitoring locations

Table 3-10 Soil Quality Result

Soil Quality Data (DEC-2023)							
			SQ1	SQ2	SQ3	SQ4	SQ5
S.No	Parameter	Unit	Project Site	Non-Agricultural Land Village Kapriwas	Non-Agricultural Land Village Gurjar Ghatal	Agricultural Land Village Sidhrawali	Agricultural Land Village Rathiwas
1	Texture	-	Sandy Loam	Sandy Loam	Sandy Loam	Sandy Loam	Sandy Loam
2	Particle Size Distribution						
	Sand	%	63.7	65.3	67.5	63.5	63.8
	Silt	%	16.9	17.2	15.3	16.8	16.9
	Clay	%	19.4	17.5	17.2	19.7	19.3
3	pH (1:2 Suspension)	-	7.59	7.67	7.69	7.78	7.88
4	Electrical Conductivity (1:2 Suspension)	µS/cm	447	443	441	447	437
5	Moisture Content	%	6.9	6.8	6.5	8.7	8.6
6	Cation Exchange Capacity	meq/100gm	13.0	13.6	13.5	14.1	14.1
7	Available Potassium (as K)	mg/kg	69	67	71	87	89
8	Exchangeable Sodium (as Na)	mg/kg	117	114	115	121	127
9	Exchangeable Calcium (as Ca)	mg/kg	1901	1947	1938	2018	2023
10	Exchangeable Magnesium (as Mg)	mg/kg	341	386	378	395	387
11	Sodium Absorption Ratio	-	0.65	0.62	0.62	0.64	0.68
12	Organic Matter	%	0.71	0.83	0.83	0.46	0.68

13	Total Nitrogen (as N)	mg/kg	40	42	38	45	44
14	Nitrate (as NO3)	mg/kg	5.7	5.3	4.9	6.3	6.7
15	Total Phosphorus (as PO4)	mg/kg	6.3	6.1	5.1	6.8	6.9
16	Iron (as Fe)	mg/kg	5.5	4.8	3.2	9.7	10.8
17	Zinc (as Zn)	mg/kg	2.2	2.1	2.3	2.1	2.6
18	Copper (as Cu)	mg/kg	1.1	1.2	1.1	1.3	1.7
19	Boron (as B)	mg/kg	1.8	2.3	2.2	3.1	2.8
20	Manganese (as Mn)	mg/kg	7.6	7.4	6.8	8.9	10.1
21	Water Holding Capacity	%	25.7	25.3	26.4	27.1	26.7
22	Permeability	cm/hr	2.3	2.2	2.3	2.1	2.2
23	Porosity	%	38.7	39.8	39.7	32.6	33.1
24	Bulk Density	gm/cc	1.31	1.31	1.32	1.33	1.33

3.7.5 Observations

Soil is the media for supplying the nutrients for plant growth. Nutrients are available to plants at certain pH and pH of soils can reflect by addition of pollutants in it either by air, or by water or by solid waste or by all of these. In order to establish the baseline status of soil characteristics, soil samples were collected at 05 sampling locations.

The analysis of results shows that soil is basic in nature as pH value ranges from 7.59 to 7.88 with Electrical Conductivity of 437 to 447 µmhos/cm. The concentration of Nitrogen, Phosphorus and Potassium has been found to be in good amount in the soil samples. Soil texture is Sandy loam at project site.

The soil lab report is attached as **Annexure.**

3.8 LAND USE PATTERN

The project area and 10 km radius around project site are encompassing a total area of 35581.43 ha comes under Gurugram District of Haryana. Project site comes under H43X3 Survey of India topo-sheet.

3.8.1 Data Used

United States Geological Survey (USGS) Satellite Data: Landsat 8 cloud free data has been used for Land use /Land cover analysis, Satellite Sensor–OLITIRS multi-spectral digital data has been used for the preparation of land use/ land cover map of present study. Survey of India reference map on 1:50,000 scales have been used for the preparation of base map and geometric correction of satellite data. Ground truthing has been carried out to validate the interpretation accuracy and reliability of remotely sensed data, by enabling verification of the interpreted details and by supplementing with the information, which cannot be obtained directly on satellite imagery.

3.8.2 Methodology

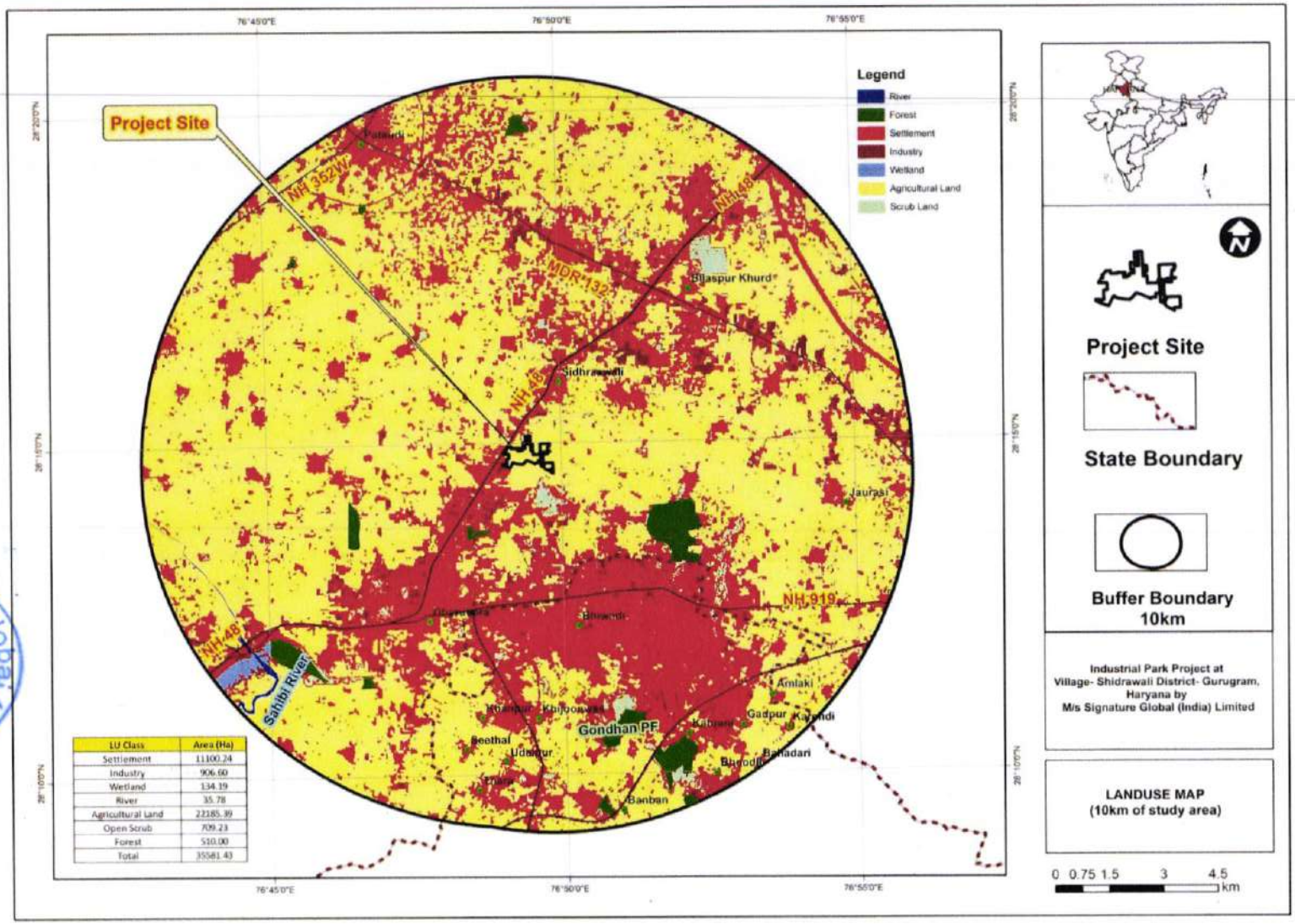
The methodology used for the study consists of following components. Thematic Data Extraction from the Satellite Imageries ERDAS image processing 10.0 software and ARC/GIS 10.0 software were used for the project. ERDAS 10.0 image processing software was used for digital processing of the spatial data. Digital image processing techniques were applied for the mapping of the land use land cover classes of the provided area from the satellite data. Methodology used for Land use Classification and Mapping is presented in Figure shown below.

3.8.3 Findings

The spatial distribution of land use/ land cover is given in **Table 3-11 and Figure 3-9.** The data base on land use/ land cover belongs to project area and 10 km radius of the project area is discussed as follows:

Table 3-11 Land Use/ Land Cover Analysis

LU Class	Area (Ha)
Settlement	11100.24
Industry	906.60
Wetland	134.19
River	35.78
Agricultural Land	22185.39
Open Scrub	709.23
Forest	510.00
Total	35581.43



LU Class	Area (Ha)
Settlement	11100.24
Industry	906.60
Wetland	134.19
River	35.78
Agricultural Land	22385.39
Open Scrub	709.23
Forest	510.00
Total	35581.43

Figure 3-7 Land Use/ Land Cover Analysis

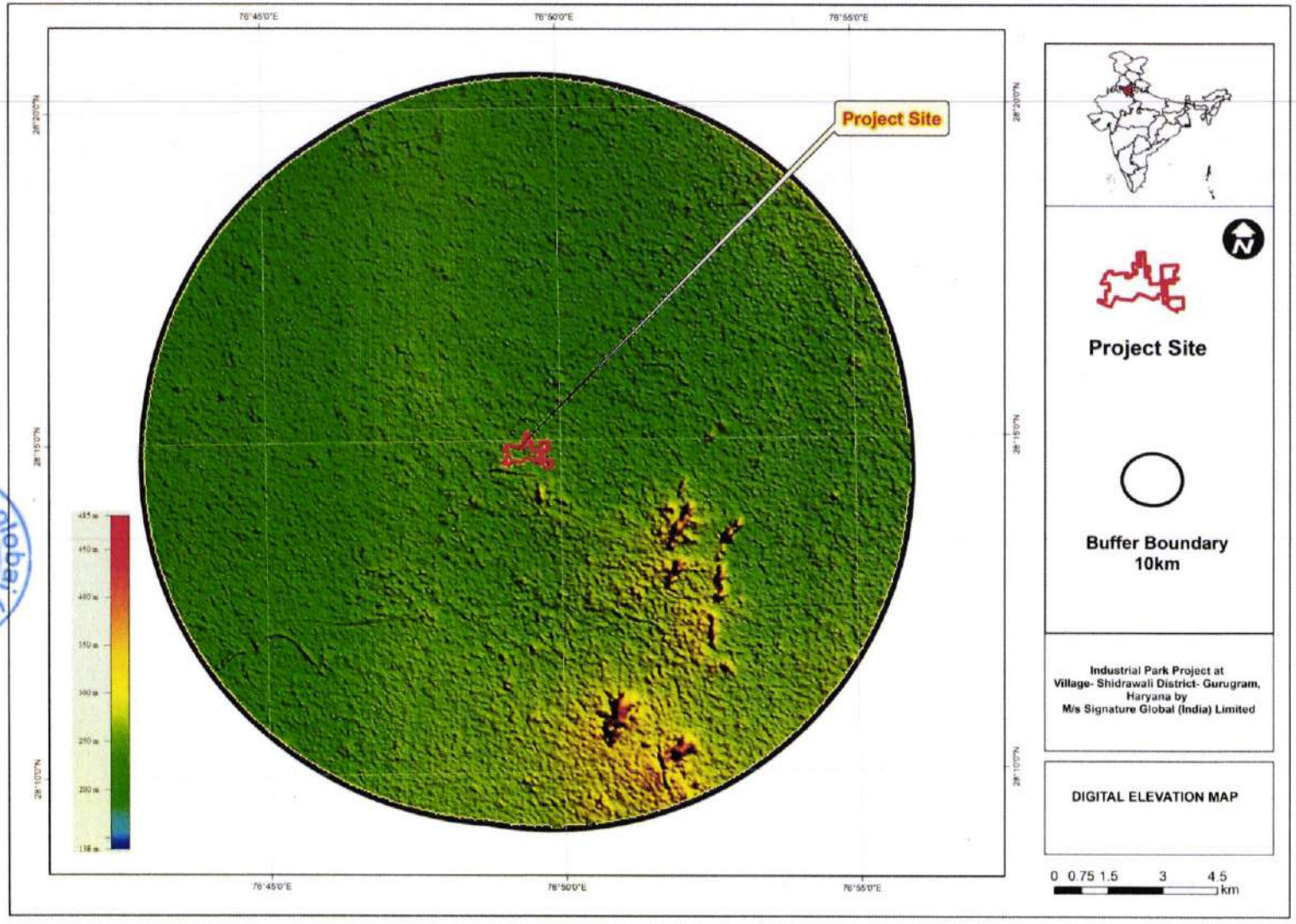


Figure 3-8 DEM Map of Study Area

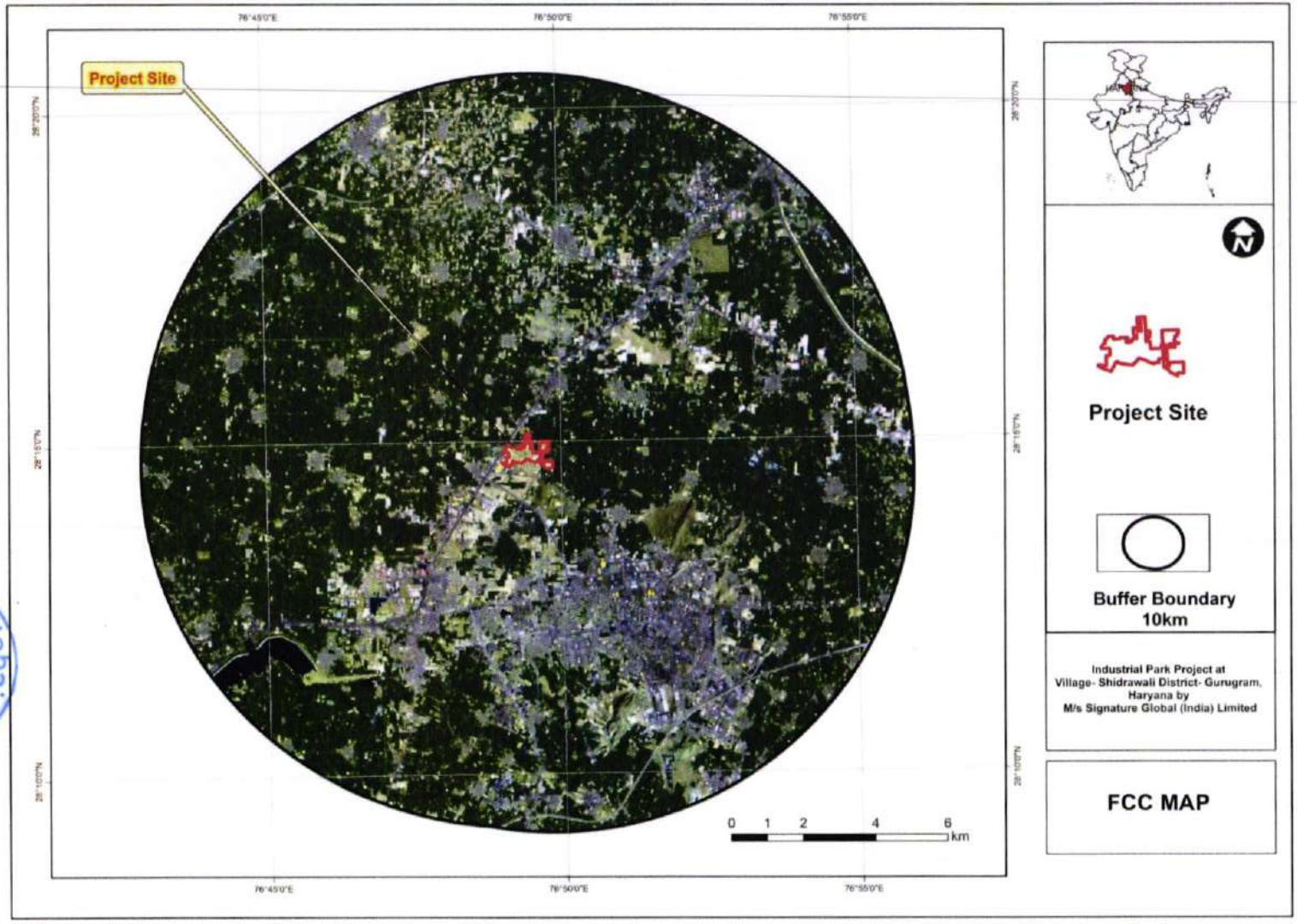


Figure 3-9 False Color Composite (FCC) map of study area

3.9 GEOLOGY

District Gurugram is located 30 km south of National Capital New Delhi, about 10 Kilometers from Dwarka sub-city and 268 Km south of Chandigarh, the State Capital. Over the past 25 years the city has undergone rapid development and construction. The District is one of Delhi's major satellite cities and is part of the National Capital Region. It is within commuting distance of Delhi via an expressway and Delhi Metro. The District is the second largest city in the Indian State of Haryana and is the industrial and financial centre of Haryana. It has the 3rd highest per capita income in India after Chandigarh and Mumbai. It is also the only Indian city to have successfully distributed electricity connections to all its households. It is also the IT hub & center of various BPO companies.

The District has been in existence since the times of Mahabharta. It is said that Yudhishter, the eldest brother among the pandavas, gave the village to his guru, Dronacharya, whose tank still exists on the west side of the Railway Road. Actual village "GURUGRAM" is about 1.5 Km. away from Gurugram town, where the temple of SHEETLA MATA, attracts devotees in large numbers on every Monday and Tuesday.

Gurugram District has witnessed a phenomenal growth in all spheres of developments, particularly in industry and urbanization. Today, it has become a hub of multinational companies, industries giants, call centres, software companies, shopping malls and skyscrapers. Gurugram is strategically located with its boundaries touching Rajasthan, Uttar Pradesh and Delhi. Its excellent connectivity with other state via Delhi- Jaipur-Ahmedabad broad gauge rail link and NH-8, brings thousands of people to Gurugram for the purpose of work, travel and entertainment. Infact with the collaboration of Suzuki Motors of Japan and Maruti Udyog Limited in early eighties, a new area of rapid industrialization of Gurugram started as a result of which the District came on the international map. Maruti Suzuki in India's largest passenger car company. The automobile industry of Gurugram is producing passenger cars, motor cycles, scooters and its components. The Gurugram- Manesar- Bawal belt has emerged as the auto hub of the country, thereby offering ample opportunities to the entrepreneurs. There are many prominent and prestigious units involved in the manufacturing of telecommunication equipments, electical goods, sports goods, rubber products readymade garments and in software development. Other industries include light engineering goods, pharmaceuticals, agro based and foods processing, leather, terry towels, air conditioners, shoes, pesticidies, insecticides, etc. The main industries in these fields are Cosco. Enkay Rubber, Perfetti, Haldiram, HFCL, Martin Haris, TERI, Ranbaxy Laboratories etc. With its rapid development, Gurugram has emerged as an important District in Haryana and has done the State proud with its achievements.

3.10 HYDROGEOLOGY

The Gurugram district is occupied by Quaternary alluvium and Pre-Cambrian meta-sediments of Delhi Super Group. The alluvium comprises of thick beds of fine to coarse-grained sand with alternating layers of thin clays. The ground water in the Jhajjar district occurs in the alluvium of Quaternary age. The permeable granular zones comprising fine to

medium sand and occasionally coarse-grained sand and gravel. Their lateral as well as vertical extent is limited.

Ground water in the Gurugram block occurs in unconfined and semiconfined condition. The upper zone of saturation consists of fine sand with silt varying from place to place. The ground water in the Jhajjar district occurs in the alluvium of Quaternary age. The permeable granular zones comprising fine to medium sand and occasionally coarse grained sand and gravel. The lithological correlation clearly indicates the presence of clay layer at the top of the surface.

3.10.1 Depth to Water Level

During the pre-monsoon the water levels of 40 key observation wells are monitored and the water level ranges between 3.30 to 79.70 mbgl. The deeper water level is observed at Dundahera, Gurugram. . Water level is less than 10 m in small patches in northwestern and southeastern parts adjacent to Jhajjar and Faridabad district and between 10 and 20 m in northwestern and southeastern parts of the district. The water level ranges between 20 and 30 m in major parts viz. central southern and eastern parts of the district. Deepar water level has been observed in Gurugram and northern parts of Sohna blocks which is due to Infrastructural development and industrialization in these areas.

During the post-monsoon, the water levels range between 3.05 to 77.55 m bgl. The deeper water level is recorded at Dundahera, Gurugram.

3.10.2 Ground Water Flow

In general, the water table contours follow the surface topography. The altitude of water table ranges between 176.78 to 274.85 m AMSL. In North and Western parts of the Gurugram district, the water table slopes North and North-West of the area whereas in Southern part water table slopes toward South Eastern direction with an average hydraulic gradient of 1.5 m/km.

The elevation of the water table in the Jhajjar district varies from 206 m to 250 m above mean sea level. The average gradient of the water table is of the order of 0.48 m/km. The general slope of water table in the area is converging towards the center of the district or more precisely around Jhajjar. It is also observed that the flow of water in the Western part of the district is towards South- West to North- East and South-East to North-West.

3.10.3 Ground Water Resources

Ground Water Resources estimation of the district was done in 2009 for Gurugram district. Perusal of the Estimates reveals overall stage of ground water development in the block is of the order of 232% which has exceeded the replenishable recharge and thus the district has been categorized as over exploited. Net annual ground water availability of the district is 23261 ham and existing gross ground water draft for all users is 53927 ham. Details are shown below.

Ground Water Resources and Development Potential, Gurugram District, Haryana (as on 31-03-2009)

District Name	Assessment Unit/Block	Net Ground Water Availability (ham)	Existing Gross Ground Water Draft for irrigation (ham)	Existing gross Ground Water Draft for domestic and industrial water supply (ham)	Existing Gross Ground Water Draft for all uses (ham)	Allocation for domestic and industrial requirement supply upto next 25 years (ham)	Net Ground Water Availability for future irrigation development (ham)	Stage of ground water development %
Gurgaon	Farukhnagar	3649	8053	177	8230	177	-4581	276
	Gurgaon	7585	6254	17128	23382	17128	-15797	308
	Pataudi	7495	11455	438	11893	438	-4398	159
	Sohna	4532	10015	407	10422	407	-5890	230
	Total	23261	35777	18150	53927	18150	-30666	232

3.10.4 Status of Ground Water Development

The water supply to the Gurugram district is mainly based on groundwater through tubewells. 100% of the urban population is covered under drinking water supply scheme. The water supply to the villages is meet out with the installation of hand pumps by the villager as spot and convenient source of water.

The shallow tubewells for irrigation purpose in the district range from 45 to 70m. deep, tapping the aquifer from 31m to 50 m. with a discharge of 400 to 1000 lpm. Most of the shallow tube wells are run either by diesel engines or electric motors. As on February 2009 there are 22207 electric motors and 736 diesel operated tubewells are working. The major part of the district is being irrigated through ground water. The unit draft calculated for irrigation is 1.65 ham.

3.10.5 Water Conservation & Artificial Recharge

The stage of ground water development for the district is 232% that means the net annual withdrawal is more than the net annual recharge. During the last 20 years the ground water level has declined in whole of the area of the district and the decline is in the range of 0.77 to 1.07 m/yr. So, there is an urgent need to take measures to arrest the decline of ground water level and artificial recharge to ground water is one of such measures. Whole of the district is suitable for artificial recharge to ground water. Excess rainwater in agricultural field, surplus canal water and rooftop rain water can be recharged to ground water system. Recharging shafts and injection wells are the most viable recharging structures suitable for the district.

3.11 DRAINAGE PATTERN

There is no perennial river in the district. Seasonal streams are only a few, smaller in size and are inland. The drainage of the district is typical of the arid and semi-arid areas. Because of topographic diversity, the streams do no flow in any uniform direction. The Sahibi Nadi,

which rises in the Sewar hills of Jaipur (Rajasthan), also makes its presence in Gurugram tehsil before losing itself in the topographic depression of Jhajjar tehsil (Jhajjar district) after flowing in northern direction through Rajasthan State and Rewari district. The Nadi disappears in Gurugram tehsil near Rewari-Pataudi road. Owing to its long passage, through arid and sandy areas, the stream flows with strength only during rainy season. However, the stream moves into the level areas of the Gurugram district, its speed slackens and the load deposited raises the bed of stream and checks its flow. Consequently, the stream sometimes changes its course and wanders aimlessly. The Indori Nadi originates from Aravalli hills in Rajasthan near village Indauri flowing in northerly direction. After passing through many villages of the district it joins Sahibi Nadi near Pataudi. It is supplemented with so many tributaries coming from Aravalli hills. Apart from the above Nadis, Badshahpur, Mehndwari, Kasan, Manesar and Landoha nallahs play havoc during heavy rains. To control these nadis/nallahs, 3 bunds are constructed at Indori Nadi and its tributaries in Haryana State and 3 bunds in Rajasthan State and the waters channelised through drains. In normal times, Landoha nala is helpful in draining waters of Sohna valley into Khalilpur depression. Drainage map is presented in below **Figure 3-10.**

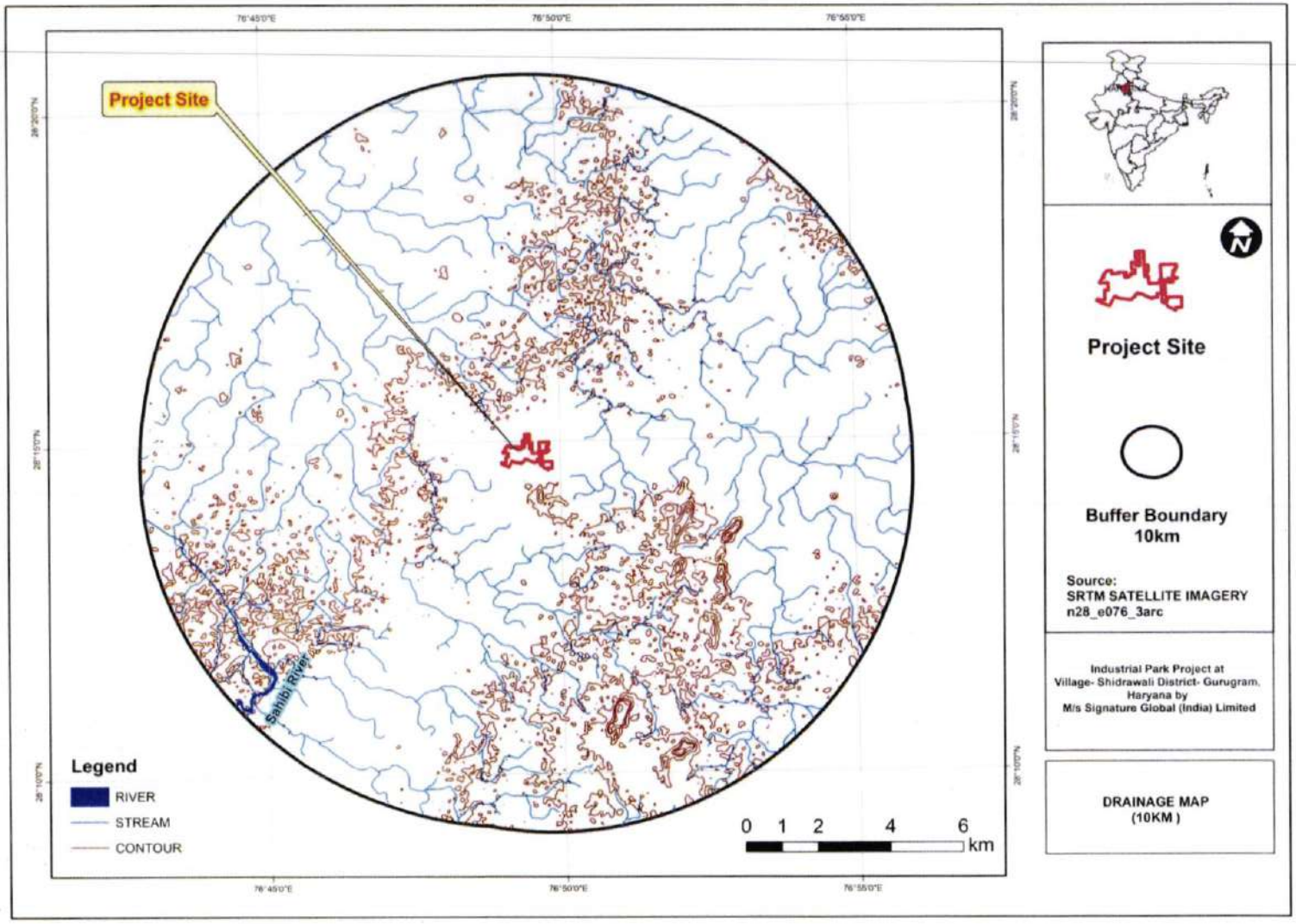


Figure 3-10 Drainage Map of 10 KM buffer

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3.12 SEISMIC STATUS

The Project site is located in an area which is falling in seismic Zone IV (Source: IS 1893 (Part 1):2002). The details are given below. According to GSHAP data, the state of Haryana falls in a region of Moderate seismic hazard.

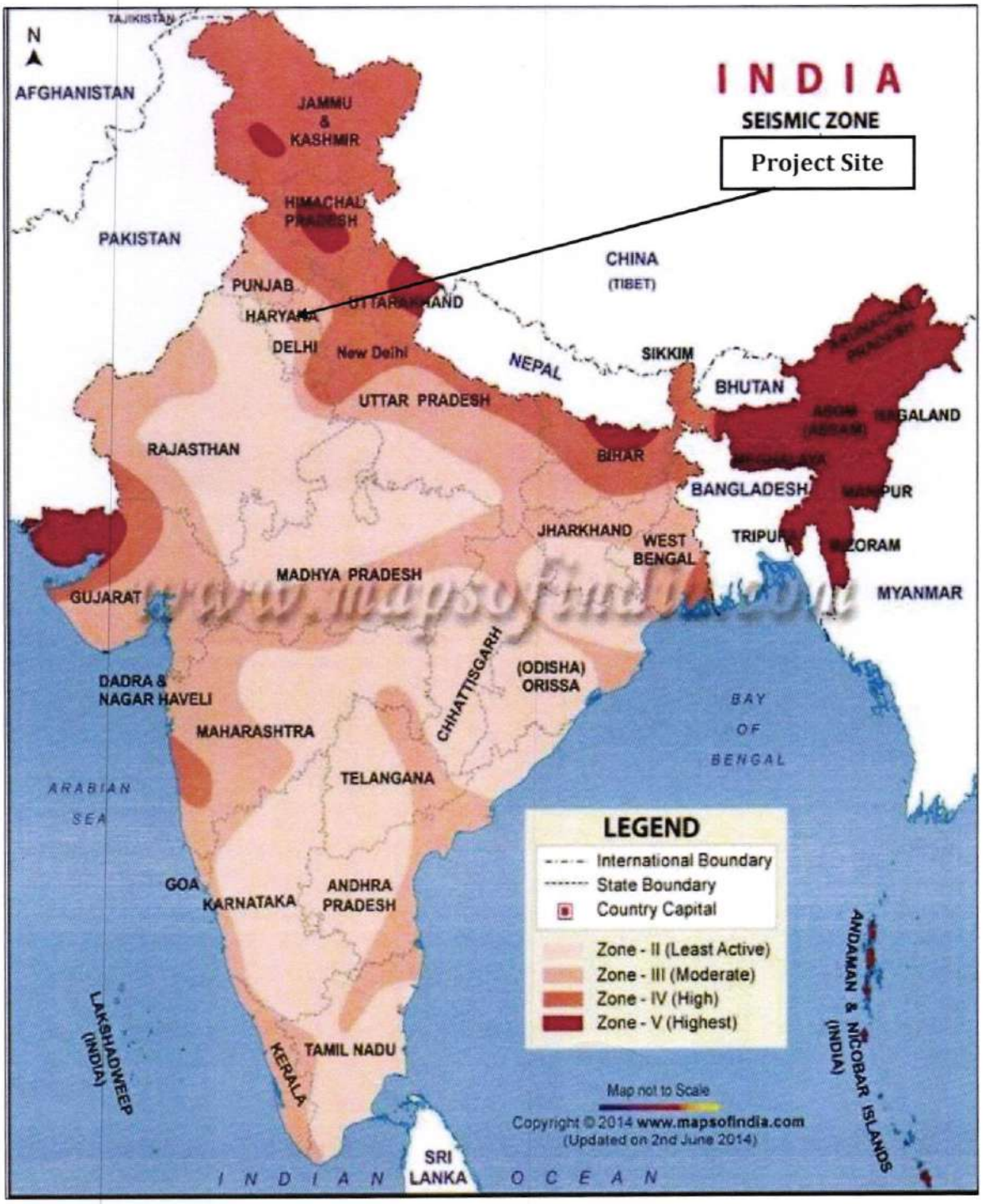


Figure 3-11 Seismic Zone Map of India

3.13 SOCIO-ECONOMICS OF THE STUDY AREA

Scope of the Proposed Study

The scope of the present study includes the followings:

1. Collection of baseline data in the study area
2. To know the socio-economic status of people living in the study area
3. To assess likely impact of the project on social and economic life of the people in the study area
4. To measure the impact of the project on quality of life of the people living in the study area
5. To confirm sustainability of positive impacts
6. To recommend mitigation measures on adverse impacts if any.

Socio-Economic Scenario- Rural area (based on Census 2011 data)

The study area comprises of 42 census villages , with a total population of 177721.This includes rural sub-district Pataudi.

Demographic features of study area: Rural area

The villages falling within the study area are listed in below table along with the demographic features as per the Census 2011.

Table 3-12 Summary of Demographic features of Rural area under study

SL.NO	VILLAGE	No_HH	TOT_P	TOT_M	TOT_F	P_06	M_06	F_06	P_SC	M_SC	F_SC	P_ST	M_ST	F_ST	P_LIT	M_LIT	F_LIT
1	Bahora Kalan(134)	3413	18961	10084	8877	2741	1496	1245	3761	1993	1768	0	0	0	13410	7863	5547
2	Bahora Khurd(136)	324	1942	1014	928	282	159	123	503	249	254	0	0	0	1356	799	557
3	Bas Padamka (41)	651	3338	1756	1582	405	231	174	662	347	315	0	0	0	2279	1357	922
4	Bastpur(25)	161	806	416	390	131	63	68	344	183	161	0	0	0	540	314	226
5	Bhudka(142)	272	1493	786	707	183	98	85	133	74	59	0	0	0	1041	629	412
6	Bhun Karka(137)	231	1268	648	620	125	60	65	91	48	43	0	0	0	932	537	395
7	Bilaspur(146)	572	3392	1812	1580	506	295	211	293	153	140	0	0	0	2244	1333	911
8	Binola(147)	201	834	469	365	121	69	52	40	22	18	0	0	0	594	373	221
9	Chandla Dungerwas(148)	392	1997	1017	980	249	120	129	335	171	164	0	0	0	1426	829	597
10	Chhawan(2)	159	808	414	394	156	87	69	95	52	43	0	0	0	484	274	210
11	Danokri(141)	155	957	504	453	146	81	65	85	44	41	0	0	0	657	388	269
12	Darapur(288)	236	1203	635	568	120	73	47	257	130	127	0	0	0	923	522	401
13	Fakharpur(133)	295	1688	895	793	224	131	93	243	130	113	0	0	0	1195	703	492
14	Fazalwas(149)	349	1866	973	893	263	144	119	322	162	160	0	0	0	1354	769	585
15	Goriawas(33)	101	509	261	248	65	38	27	35	17	18	0	0	0	343	204	139
16	Hera Heri(36)	177	947	495	452	99	50	49	322	161	161	0	0	0	700	416	284
17	Joniawas(19)	407	2037	1080	957	248	141	107	188	103	85	0	0	0	1436	839	597
18	Kaliawas(41)	359	1926	1012	914	220	132	88	110	59	51	0	0	0	1405	812	593
19	Khanpur(34)	171	745	390	355	106	63	43	345	170	175	0	0	0	524	294	230
20	Kharkhari(131)	341	1907	985	922	247	138	109	507	260	247	0	0	0	1357	774	583
21	Khor(32)	888	4933	2556	2377	624	336	288	1084	559	525	0	0	0	3390	1987	1403
22	Langra(145)	241	1377	708	669	209	101	108	616	308	308	0	0	0	928	536	392
23	Lohchap(26)	301	1442	765	677	163	84	79	250	122	128	0	0	0	1067	642	425
24	Lokra(289)	422	2093	1095	998	270	152	118	388	208	180	0	0	0	1451	847	604
25	Lokri(287)	406	2402	1255	1147	375	197	178	375	193	182	0	0	0	1544	928	616
26	Mao(297)	362	2265	1168	1097	334	174	160	321	174	147	0	0	0	1531	891	640
27	Mubarikpur(37)	541	2944	1548	1396	447	237	210	520	269	251	0	0	0	1916	1111	805
28	Mumtajpur(38)	268	1315	697	618	144	83	61	172	88	84	0	0	0	946	563	383
29	Nanu Khurd(29)	190	1036	542	494	110	67	43	185	87	98	0	0	0	736	435	301
30	Nanukalan(27)	765	4095	2143	1952	557	311	246	644	341	303	0	0	0	2858	1654	1204
31	Narhera(44)	867	4414	2293	2121	688	348	340	1212	623	589	0	0	0	2844	1669	1175
32	Nurpur Bahora(135)	218	1223	639	584	140	74	66	257	132	125	0	0	0	905	539	366
33	Pataudi SUB DIST	15122	78688	41060	37628	10378	5691	4687	17485	9049	8436	0	0	0	54906	32094	22812
34	Pathrari(143)	884	5014	2601	2413	645	358	287	775	381	394	0	0	0	3482	2038	1444
35	Prasoli(138)	295	1504	797	707	215	125	90	430	235	195	0	0	0	1014	599	415
36	Rathiwas(140)	600	3502	1802	1700	423	236	187	515	256	259	0	0	0	2501	1444	1057
37	Said Shahpur(24)	63	365	191	174	50	30	20	201	101	100	0	0	0	237	134	103
38	Sapedar Nagar(37)	34	207	110	97	23	18	5	10	4	6	0	0	0	159	88	71
39	Sidhrawali(139)	1073	5506	2886	2620	722	407	315	896	464	432	0	0	0	3930	2275	1655
40	Turkapur(40)	173	884	453	431	112	61	51	46	19	27	0	0	0	602	348	254
41	Udepuri(144)	6	31	17	14	0	0	0	31	17	14	0	0	0	29	16	13
42	Uncha Majra(43)	689	3857	1973	1884	546	294	252	908	456	452	0	0	0	2620	1479	1141
			0			0			0			0			0		
	TOTAL	33375	177721	92945	84776	23812	13053	10759	35992	18614	17378	0	0	0	123796	72346	51450
	AVERAGE	795	4231	2213	2018	567	311	256	857	443	414	0	0	0	2948	1723	1225
			0			0			0			0			0		
DISTRI	Gurgaon	88678	472179	251462	220717	67473	37459	30004	90113	47249	42864	0	0	0	324087	192288	131799

VILLAGE	P_ILL	M_ILL	F_ILL	TOT_WORK_P	TOT_WORK_M	TOT_WORK_F	MAINWORK_P	MAINWORK_M	MAINWORK_F	MAIN_CL_P	MAIN_CL_M	MAIN_CL_F	MAIN_AL_P	MAIN_AL_M	MAIN_AL_F
Bahora Kalan(134)	5551	2221	3330	5866	4809	1057	4760	4175	585	971	839	132	350	283	67
Bahora Khurd(136)	586	215	371	717	516	201	577	495	82	200	191	9	65	53	12
Bas Padamka (41)	1059	399	660	1044	859	185	915	814	101	375	342	33	179	143	36
Bastpur(25)	266	102	164	196	191	5	135	130	5	17	16	1	2	2	0
Bhudka(142)	452	157	295	597	373	224	571	366	205	278	198	80	13	13	0
Bhun Karka(137)	336	111	225	343	282	61	249	195	54	76	43	33	23	15	8
Bilaspur(146)	1148	479	669	1165	806	359	990	771	219	372	299	73	55	32	23
Binola(147)	240	96	144	352	274	78	308	270	38	102	99	3	15	12	3
Chandla Dungerwas(148)	571	188	383	705	510	195	592	458	134	369	259	110	15	11	4
Chhawan(2)	324	140	184	244	188	56	222	175	47	42	39	3	40	34	6
Danokri(141)	300	116	184	370	232	138	321	188	133	145	135	10	1	1	0
Darapur(288)	280	113	167	311	292	19	298	279	19	66	63	3	12	11	1
Fakharpur(133)	493	192	301	444	421	23	427	407	20	186	177	9	7	7	0
Fazalwas(149)	512	204	308	448	422	26	423	401	22	92	89	3	37	34	3
Goriawas(33)	166	57	109	262	134	128	47	39	8	5	5	0	9	7	2
Hera Heri(36)	247	79	168	228	214	14	227	213	14	93	90	3	11	10	1
Joniawas(19)	601	241	360	602	520	82	512	467	45	310	282	28	4	4	0
Kaliawas(41)	521	200	321	639	491	148	466	407	59	194	161	33	56	46	10
Khanpur(34)	221	96	125	347	199	148	172	140	32	72	51	21	13	10	3
Kharkhari(131)	550	211	339	611	479	132	544	457	87	211	146	65	28	23	5
Khor(32)	1543	569	974	1762	1241	521	1111	978	133	439	392	47	244	209	35
Langra(145)	449	172	277	633	361	272	337	272	65	160	107	53	34	28	6
Lohchap(26)	375	123	252	585	382	203	506	320	186	99	86	13	264	112	152
Lokra(289)	642	248	394	530	497	33	409	388	21	147	146	1	20	19	1
Lokri(287)	858	327	531	603	569	34	520	499	21	317	307	10	31	29	2
Mao(297)	734	277	457	666	535	131	580	492	88	225	201	24	3	2	1
Mubarikpur(37)	1028	437	591	1056	764	292	837	637	200	432	325	107	280	196	84
Mumtajpur(38)	369	134	235	489	327	162	352	237	115	14	11	3	15	12	3
Nanu Khurd(29)	300	107	193	371	235	136	226	212	14	145	135	10	1	1	0
Nanukalan(27)	1237	489	748	1035	919	116	780	716	64	62	55	7	46	40	6
Narhera(44)	1570	624	946	1177	1054	123	957	892	65	202	194	8	123	103	20
Nurpur Bahora(135)	318	100	218	620	390	230	499	347	152	184	168	16	73	48	25
Pataudi-SUB DIST	23782	8966	14816	25482	19489	5993	18357	16197	2160	6070	5412	658	2260	1835	425
Pathrari(143)	1532	563	969	1498	1165	333	1354	1060	294	622	461	161	50	43	7
Prasoli(138)	490	198	292	547	375	172	533	364	169	231	102	129	9	8	1
Rathiwas(140)	1001	358	643	1288	835	453	1153	744	409	618	322	296	32	24	8
Said Shahpur(24)	128	57	71	138	90	48	90	78	12	33	28	5	24	22	2
Sapedar Nagar(37)	48	22	26	61	55	6	61	55	6	1	1	0	28	27	1
Sidhrawali(139)	1576	611	965	2057	1404	653	1852	1262	590	364	299	65	31	16	15
Turkapur(40)	282	105	177	214	198	16	199	188	11	97	92	5	28	28	0
Udepuri(144)	2	1	1	11	7	4	7	6	1	0	0	0	1	1	0
Uncha Majra(43)	1237	494	743	1027	929	98	924	845	79	384	371	13	89	66	23
	0			0			0			0			0		
TOTAL	53925	20599	33326	57341	44033	13308	44400	37636	6764	15022	12739	2283	4621	3620	1001
AVERAGE	1284	490	793	1365	1048	317	1057	896	161	358	303	54	110	86	24
	0			0			0			0			0		
Gurgaon	148092	59174	88918	158462	121734	36728	124933	105706	19227	39047	33423	5624	10113	7945	2168

SL.NO.	VILLAGE	MAIN_HH_P	MAIN_HH_M	MAIN_HH_F	MAIN_OT_P	MAIN_OT_M	MAIN_OT_F	MARGWORK_P	MARGWORK_M	MARGWORK_F	MARG_CL_P	MARG_CL_M	MARG_CL_F	MARG_AL_P	MARG_AL_M	MARG_AL_F
1	Bahora Kalan(134)	143	128	15	3296	2925	371	1106	634	472	97	24	73	359	172	187
2	Bahora Khurd(136)	54	20	34	258	231	27	140	21	119	5	3	2	24	12	12
3	Bas Padamka (41)	4	4	0	357	325	32	129	45	84	67	2	65	14	3	11
4	Bastpur(25)	2	2	0	114	110	4	61	61	0	3	3	0	32	32	0
5	Bhudka(142)	6	5	1	274	150	124	26	7	19	12	2	10	9	2	7
6	Bhun Karka(137)	4	2	2	146	135	11	94	87	7	8	6	2	71	70	1
7	Bilaspur(146)	38	21	17	525	419	106	175	35	140	47	5	42	27	6	21
8	Binola(147)	4	4	0	187	155	32	44	4	40	3	2	1	2	2	0
9	Chandla Dungerwas(148)	6	5	1	202	183	19	113	52	61	71	16	55	7	7	0
10	Chhawan(2)	37	32	5	103	70	33	22	13	9	3	1	2	4	3	1
11	Danokri(141)	3	3	0	172	49	123	49	44	5	0	0	0	49	44	5
12	Darapur(288)	4	4	0	216	201	15	13	13	0	0	0	0	1	1	0
13	Fakharpur(133)	7	7	0	227	216	11	17	14	3	0	0	0	11	11	0
14	Fazalwas(149)	11	11	0	283	267	16	25	21	4	0	0	0	4	3	1
15	Goriawas(33)	0	0	0	33	27	6	215	95	120	180	77	103	27	14	13
16	Hera Heri(36)	0	0	0	123	113	10	1	1	0	0	0	0	0	0	0
17	Joniawas(19)	6	6	0	192	175	17	90	53	37	39	8	31	40	35	5
18	Kaliawas(41)	13	12	1	203	188	15	173	84	89	103	38	65	41	23	18
19	Khanpur(34)	14	14	0	73	65	8	175	59	116	78	27	51	65	5	60
20	Kharkhari(131)	30	29	1	275	259	16	67	22	45	49	8	41	0	0	0
21	Khor(32)	27	24	3	401	353	48	651	263	388	318	47	271	259	172	87
22	Langra(145)	4	3	1	139	134	5	296	89	207	143	36	107	110	27	83
23	Lohchap(26)	22	9	13	121	113	8	79	62	17	2	1	1	52	44	8
24	Lokra(289)	1	1	0	241	222	19	121	109	12	6	3	3	56	51	5
25	Lokri(287)	6	5	1	166	158	8	83	70	13	6	3	3	33	30	3
26	Mao(297)	15	14	1	337	275	62	86	43	43	35	2	33	3	3	0
27	Mubarikpur(37)	22	22	0	103	94	9	219	127	92	28	13	15	181	106	75
28	Mumtajpur(38)	87	35	52	236	179	57	137	90	47	8	6	2	13	6	7
29	Nanu Khurd(29)	0	0	0	80	76	4	145	23	122	123	1	122	0	0	0
30	Nanukalan(27)	47	42	5	625	579	46	255	203	52	7	4	3	40	25	15
31	Narhera(44)	12	11	1	620	584	36	220	162	58	9	6	3	30	21	9
32	Nurpur Bahora(135)	1	1	0	241	130	111	121	43	78	39	14	25	23	13	10
33	Pataudi-SUB DIST	490	365	125	9537	8585	952	7125	3292	3833	2554	719	1835	2185	1133	1052
34	Pathrari(143)	21	19	2	661	537	124	144	105	39	21	11	10	81	72	9
35	Prasoli(138)	0	0	0	293	254	39	14	11	3	1	0	1	0	0	0
36	Rathiwas(140)	14	10	4	489	388	101	135	91	44	3	2	1	113	73	40
37	Said Shahpur(24)	0	0	0	33	28	5	48	12	36	18	2	16	29	10	19
38	Sapedar Nagar(37)	5	4	1	27	23	4	0	0	0	0	0	0	0	0	0
39	Sidhrawali(139)	12	12	0	1445	935	510	205	142	63	70	33	37	52	43	9
40	Turkapur(40)	7	7	0	67	61	6	15	10	5	5	2	3	8	6	2
41	Udepuri(144)	0	0	0	6	5	1	4	1	3	0	0	0	1	0	1
42	Uncha Majra(43)	13	10	3	438	398	40	103	84	19	8	7	1	40	31	9
		0			0			0			0			0		
	TOTAL	1192	903	289	23565	20374	3191	12941	6397	6544	4169	1134	3035	4096	2311	1785
	AVERAGE	28	22	7	561	485	76	308	152	156	99	27	72	98	55	43
		0			0			0			0			0		
DISTRI	Gurgaon	3621	2545	1076	72152	61793	10359	33529	16028	17501	11041	3266	7775	8939	4839	4100

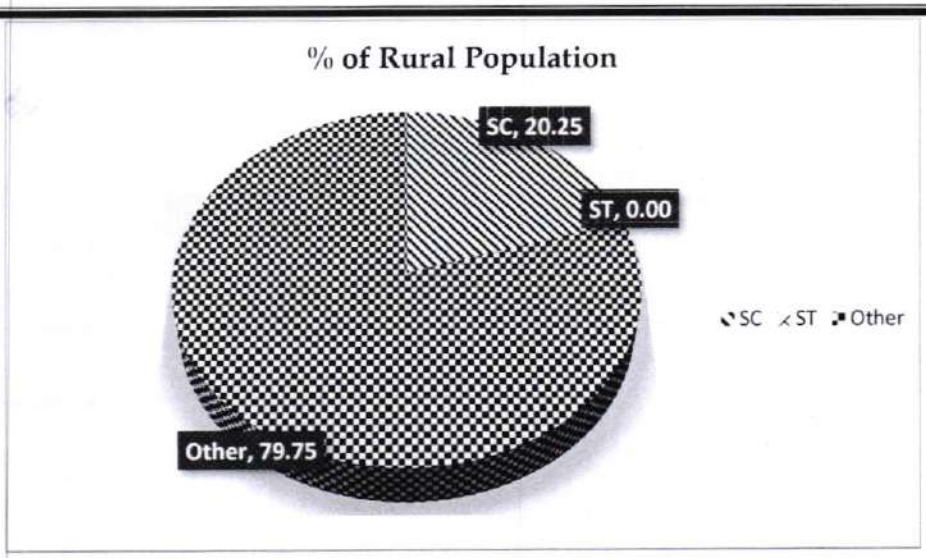




SL.NO.	VILLAGE	MARG_HH_P	MARG_HH_M	MARG_HH_F	MARG_OT_P	MARG_OT_M	MARG_OT_F	NON_WORK_P	NON_WORK_M	NON_WORK_F
1	Bahora Kalan(134)	45	25	20	605	413	192	13095	5275	7820
2	Bahora Khurd(136)	90	0	90	21	6	15	1225	498	727
3	Bas Padamka (41)	1	1	0	47	39	8	2294	897	1397
4	Bastpur(25)	0	0	0	26	26	0	610	225	385
5	Bhudka(142)	0	0	0	5	3	2	896	413	483
6	Bhun Karka(137)	1	0	1	14	11	3	925	366	559
7	Bilaspur(146)	26	3	23	75	21	54	2227	1006	1221
8	Binola(147)	21	0	21	18	0	18	482	195	287
9	Chandla Dungerwas(148)	0	0	0	35	29	6	1292	507	785
10	Chhawan(2)	4	2	2	11	7	4	564	226	338
11	Danokri(141)	0	0	0	0	0	0	587	272	315
12	Darapur(288)	2	2	0	10	10	0	892	343	549
13	Fakharpur(133)	1	0	1	5	3	2	1244	474	770
14	Fazalwas(149)	11	8	3	10	10	0	1418	551	867
15	Goriawas(33)	0	0	0	8	4	4	247	127	120
16	Hera Heri(36)	0	0	0	1	1	0	719	281	438
17	Joniawas(19)	1	1	0	10	9	1	1435	560	875
18	Kaliawas(41)	3	2	1	26	21	5	1287	521	766
19	Khanpur(34)	3	1	2	29	26	3	398	191	207
20	Kharkhari(131)	7	6	1	11	8	3	1296	506	790
21	Khor(32)	7	4	3	67	40	27	3171	1315	1856
22	Langra(145)	5	0	5	38	26	12	744	347	397
23	Lohchap(26)	5	2	3	20	15	5	857	383	474
24	Lokra(289)	2	2	0	57	53	4	1563	598	965
25	Lokri(287)	8	7	1	36	30	6	1799	686	1113
26	Mao(297)	0	0	0	48	38	10	1599	633	966
27	Mubarikpur(37)	1	1	0	9	7	2	1888	784	1104
28	Mumtajpur(38)	7	3	4	109	75	34	826	370	456
29	Nanu Khurd(29)	0	0	0	22	22	0	665	307	358
30	Nanukalan(27)	8	4	4	200	170	30	3060	1224	1836
31	Narhera(44)	7	4	3	174	131	43	3237	1239	1998
32	Nurpur Bahora(135)	0	0	0	59	16	43	603	249	354
33	Pataudi-SUB DIST	136	77	59	2250	1363	887	53206	21571	31635
34	Pathrari(143)	1	0	1	41	22	19	3516	1436	2080
35	Prasoli(138)	0	0	0	13	11	2	957	422	535
36	Rathiwas(140)	1	0	1	18	16	2	2214	967	1247
37	Said Shahpur(24)	0	0	0	1	0	1	227	101	126
38	Sapedar Nagar(37)	0	0	0	0	0	0	146	55	91
39	Sidhrawali(139)	4	1	3	79	65	14	3449	1482	1967
40	Turkapur(40)	0	0	0	2	2	0	670	255	415
41	Udepuri(144)	3	1	2	0	0	0	20	10	10
42	Uncha Majra(43)	1	0	1	54	46	8	2830	1044	1786
		0			0			0		
	TOTAL	412	157	255	4264	2795	1469	120380	48912	71468
	AVERAGE	10	4	6	102	67	35	2866	1165	1702

Population:

The total population of 42 census villages is 177721. This includes rural sub-district Pataudi. The % of Schedule Caste (SC) and Schedule Tribe (ST) to the total population is 20.25 & 0 respectively. There are no Schedule tribes.



Village size:

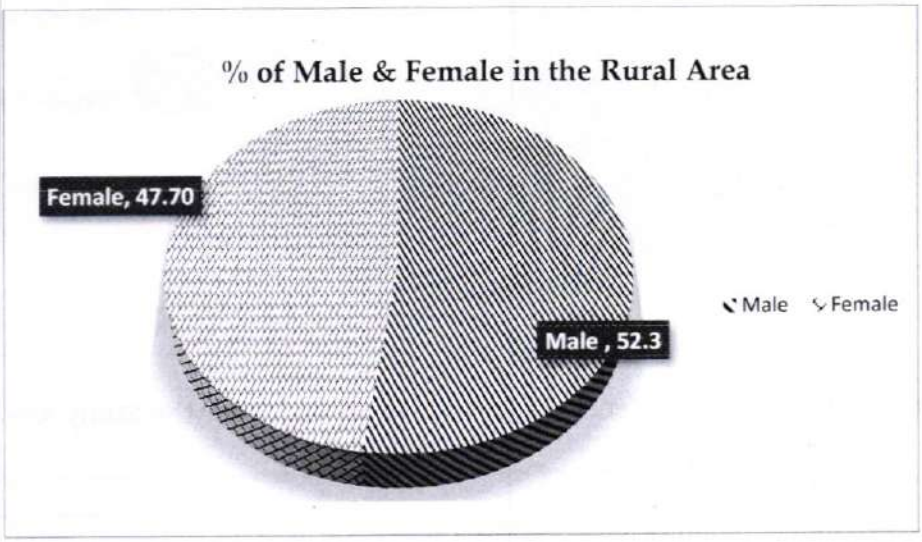
The total households in the 42 villages are 33375. The average household per village is 795.

House hold size:

The average household size is 5.32 in rural area.

Sex ratio:

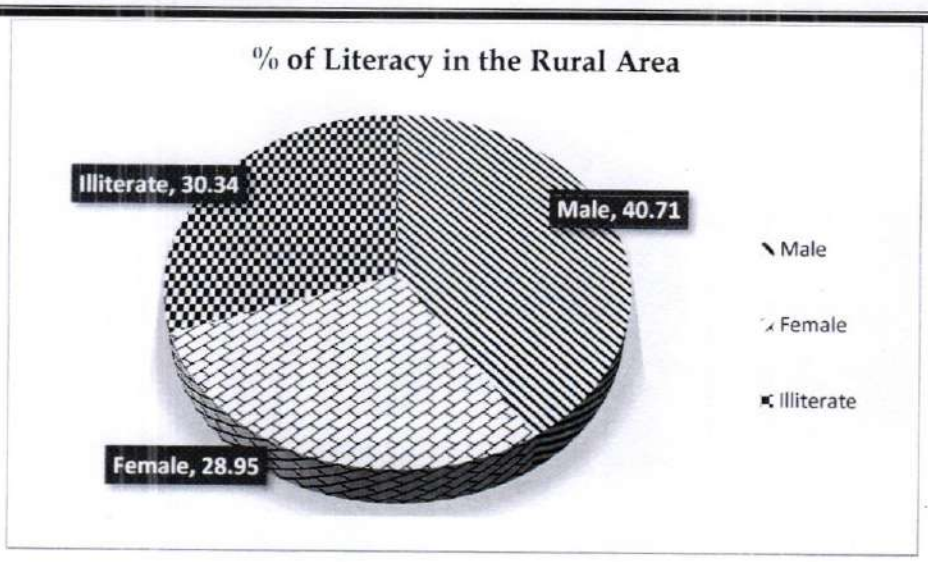
The sex ratio of the study area is 912 females per thousand male population in rural area. The percentage of male and female population to the total population is 52.30 and 47.70 respectively.



Literacy:

The percentage of literacy in the area is 69.66.

The % male and female literacy to the total population is 40.71 & 28.95 respectively.



Occupational structure of the study area: The percentage of total workers to the total population of the rural area is 32.26 in which main workers constitute 24.98 % and marginal workers constitute 7.28 % and remaining 67.74 % constitute non-workers.

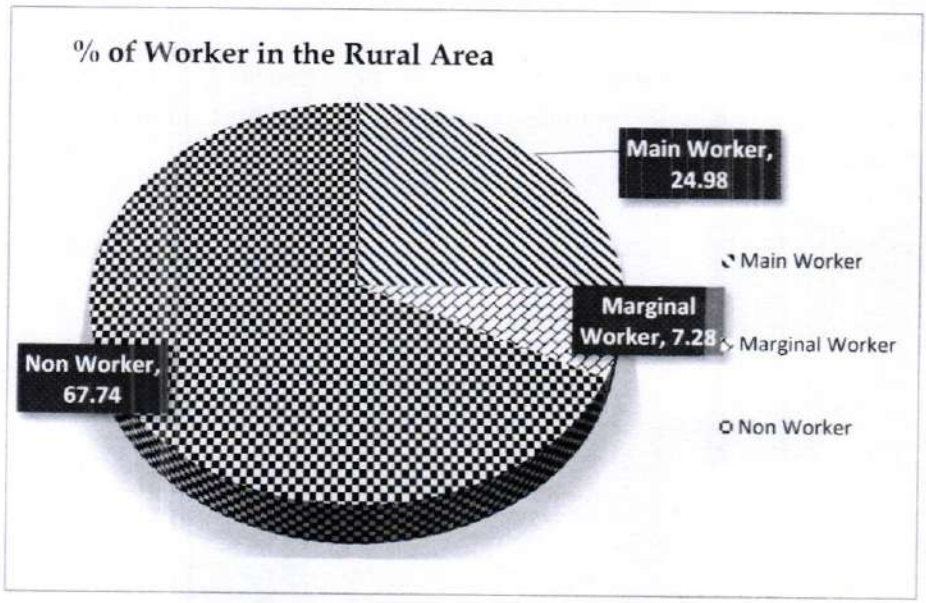


Table 3-13 Demographic features and other Statistics for the Study Area (Rural Area) as per Census 2011

Sl.	Details	No./%
1	Total population	177721
2	No. of House hold	33375
3	Average family size	5.32
4	Average no. of house hold per village	795
5	Average population per village	4231
6	Sex ratio –females per thousand males	912
7	Percent of male population to total population	52.30
8	Percent of female population to total population	47.70
9	Percent of SC population to the total population	20.25

10	Percent of ST population to the total population	0
11	Percent of literate population to the total population	69.66
12	Percent of Male literate population to the total population	40.71
13	Percent of Female literate population to the total population	28.95
14	Percent of total main worker to the total population	24.98
15	Percent of total marginal worker to the total population	7.28
16	Percent of non-worker to the total population	67.74

From the table it is clear that Sex Ratio is on a lower side. There is no ST population.
Gender gap between male and female literacy is approx. 12%.
Employment is a major concern besides literacy.

Demographic features of study area: Urban Area

Further the study area comprises of Sub District Gurugram and Sohna, with a total population of 41324.

Table 3-14 Summary of Demographic features of Urban area under study

Description	Pataudi -SUB DIST	Dist. Gurgoan Urban
Number of Households	7454	237750
Total Population (Persons)	41324	1042253
Total Population (Males)	21745	565228
Total Population (Females)	19579	477025
Population in age group 0-6 years (Persons)	5729	135129
Population in age group 0-6 years (Males)	3078	73236
Population in age group 0-6 years (Females)	2651	61893
Scheduled Caste Population (Persons)	9825	107824
Scheduled Caste Population (Males)	5124	57083
Scheduled Caste Population (Females)	4701	50741
Scheduled Tribe Population (Persons)	0	0
Scheduled Tribe Population (Males)	0	0
Scheduled Tribe Population (Females)	0	0
Literates (Persons)	28400	787029
Literates (Males)	16254	446378
Literates (Females)	12146	340651
Illiterates (Persons)	12924	255224
Illiterates (Males)	5491	118850
Illiterates (Females)	7433	136374
Total Workers (Persons)	12045	386254
Total Workers (Males)	10340	310722
Total Workers (Females)	1705	75532
Main Workers (Persons)	10099	362508
Main Workers (Males)	8911	294680
Main Workers (Females)	1188	67828
Main Workers - Cultivators (Persons)	709	5382
Main Workers - Cultivators (Males)	645	4796
Main Workers - Cultivators (Females)	64	586

Main Workers - Agricultural Labourers (Persons)	541	5612
Main Workers - Agricultural Labourers (Males)	460	4662
Main Workers - Agricultural Labourers (Females)	81	950
Main Workers - Workers in Household Industries (Persons)	727	12381
Main Workers - Workers in Household Industries (Males)	551	10229
Main Workers - Workers in Household Industries (Females)	176	2152
Main Workers - Other Workers (Persons)	8122	339133
Main Workers - Other Workers (Males)	7255	274993
Main Workers - Other Workers (Females)	867	64140
Marginal Workers (Persons)	1946	23746
Marginal Workers (Males)	1429	16042
Marginal Workers (Females)	517	7704
Marginal Workers - Cultivators (Persons)	75	576
Marginal Workers - Cultivators (Males)	40	357
Marginal Workers - Cultivators (Females)	35	219
Marginal Workers - Agricultural Labourers (Persons)	422	2433
Marginal Workers - Agricultural Labourers (Males)	281	1667
Marginal Workers - Agricultural Labourers (Females)	141	766
Marginal Workers - Workers in Household Industries (Persons)	81	1040
Marginal Workers - Workers in Household Industries (Males)	45	551
Marginal Workers - Workers in Household Industries (Females)	36	489
Marginal Workers - Other Workers (Persons)	1368	19697
Marginal Workers - Other Workers (Males)	1063	13467
Marginal Workers - Other Workers (Females)	305	6230
Non-Workers (Persons)	29279	655999
Non-Workers (Males)	11405	254506
Non-Workers (Females)	17874	401493

Table 3-15 Summary of Demographic features Rural vs Urban area under study

Sl.	Details	No./%	
		Rural	Urban
1	Total population	177721	41324
2	No. of House hold	33375	7454
3	Average family size	5.32	5.54
4	Sex ratio –females per thousand males	912	900
5	Percent of male population to total population	52.30	52.62
6	Percent of female population to total population	47.70	47.38
7	Percent of SC population to the total population	20.25	23.78
8	Percent of ST population to the total population	0	0
9	Percent of literate population to the total population	69.66	68.73
10	Percent of Male literate population to the total	40.71	39.33

	population		
11	Percent of Female literate population to the total population	28.95	29.39
12	Percent of total main worker to the total population	24.98	24.44
13	Percent of total marginal worker to the total population	7.28	4.71
14	Percent of non-worker to the total population	67.74	70.85

SC population is more by 3 to 4 % in urban area as compared to rural area. There is no ST population in both rural and urban area.
Literacy is almost same in rural and urban area . Gender gap between male and female literacy is approx. 10% in urban area as compared to 12 % in rural area.
In urban area marginal workers are less by approx. 2 to 3 % as compared to rural area.
Non-workers are more by 3 % in urban area as compared to rural area.
Employment is a major concern besides literacy in both rural and urban area.

Primary Survey

The nearby villages were selected for field survey.
Bhun Karka, Bilaspur, Danokri, Darapur, Joniawas, Lohchap, Lokra, Lokri, Mao, Nurpur Bahora, Jharsa, Prasoli, Rathiwas, Sidhrawali, Pataudi rural and urban sub districts etc.

Further the data for villages surveyed and data available for the same villages of Census 2011 was compared and data found to be validated.

Basic Observations

1. There is termite problem in almost all the villages.
2. Hinduism is the majority religion in Gurugram city with 92 % followers followed by Islam 5 %. There are no ST category people .
3. The villages in the core zone and buffer zone are having primary amenities and infrastructural facilities.
4. Sex Ratio is on a lower side and is alarming for both rural and urban area.
5. Gender gap between male and female literacy is alarming for both rural and urban area.
6. Employment is a major concern besides literacy for both rural and urban area.
7. Primary survey was conducted in nearby villages & data collected based on specific designed Questionnaire & focused group discussions. There has been increase in the population & other related factors since 2011 (male population, female population, SC/ST population, literacy, working population, category of workers etc.). While comparing the house hold survey results with census data 2011 the observations are found to be validated.
8. Gurugram District has witnessed a phenomenal growth in all spheres of developments, particularly in industry and urbanization. Today, it has become a hub of multinational companies, industries giants, call centres, software companies, shopping malls and skyscrapers.

9. The inferences cannot be generalized due to limitation of survey and also cost consideration. As such the inferences cannot be used for any other purpose and is not liable for any legal action.

Demography-Census 2011

Title	Detail
Population	1514085
Area	1253 sq. km.
Rank in India	328/640
Population Density	1241 inhabitants per sq.km.
Population Growth Rate	79.93%
Sex Ratio	853 females per 1000 males
Literacy Rate	84.4%

Economy

The city benefits from its close proximity to Delhi.

Gurugram has the third highest per-capita income in India and is the site of Indian offices for half of Fortune 500 companies.

Maruti Suzuki Private Limited was the first company that set up a manufacturing unit in the city in 1970s making cars.

Eventually, DLF Limited, a real estate company acquired vast stretches of land in the city.

The first major American brand to set up a unit in Gurugram was General Electric in 1997. General Electric's setup in Gurugram prompted other companies, both international as well as domestic, to follow suit providing outsourcing solutions in software, IT, service and sales through delivery facilities and call centres.

Apart from Business process outsourcing and IT sectors, the city is home to several other companies that specialise in domain expertise. Siemens Industry Software, in Gurugram Business Park, made a portfolio of design software that was used by NASA to digitally design, simulate and assemble the vehicle before any physical prototypes were built.

Various international companies, including Coca-Cola, Pepsi, BMW, Agilent Technologies, Hyundai have chosen Gurugram to be their Indian corporate headquarters; this continues to be apparent in the 2020s, with Cargill and Nissan making the same choice. All the major

companies in the city depend on their own backup, given the fact that Gurugram does not have reliable power and water supply, public transport and utilities.

Retail is an important industry in Gurugram, with the presence of more than 25 shopping malls.

All Nippon Airways, a Japanese airline, maintains its Delhi sales office in the Time Tower in Gurugram.

Technology company Lets Track is headquartered in Gurugram.

There are seven industrial areas in Gurugram. Presently there are more than 4200 production units in more than 1700 ha industrial area.

List of Large & Medium Industries of Gurugram

- ASK Automotive (Italy) Gurugram (brake shoes) Aksh Optifibre Limited (Manesar)
- Amtek (UK, Japan) Delhi , Manesar (connecting rods) Ample Auto, Gurugram
- Anand Motors Products (USA) Delhi and Gurugram (components)
- Anand Nishikawa (Japan) Delhi, Gurugram Udyog Vihar Phase 1 (rubber parts) Anu Autos Industries (France, South Korea) Gurugram (locking systems) Apollo Tyres Gurugram
- Arvin Industries) Gurugram (filter) Bharat Seats (Japan) Haryana (seats) BMW (Gurugram, only HQ)
- Bosch Chassis Manesar
- Bosch (Germany) Gurugram (pumps) Caparo Maruti (UK) Gurugram (sheet metal) Climax Overseas Manesar
- Continental, Gurugram
- D.I. Filter Systems (USA, Donaldson Company) Gurugram (air filters) Deadong Gurugram (cables)
- Delphi Automotives (USA) Gurugram (steering systems, wiring harness) Donaldson Company Gurugram (air filters)
- Echlin India (USA) Haryana (brakes) Eicher Faridabad
- FCC Rico (Japan) Gurugram (clutch assembly) Ferodo (UK) Gurugram (brakes)
- Gabriel India Ltd. Gurugram
- Henkel Teroson (Germany) Gurugram (anti-freezing coolant)
- Highway Cycles Industries (Japan, Honda) Gurugram (piston for engines) Hilton Roulunds (Denmark) Haryana (automotive belts)
- Haryana Sheet Glass LTD (UK, Pilikington) Haryana (automotive glass) Haryana DD Autos (Germany) Haryana (shafts)
- Haryana Deepey Autos (UK, Woodhead) Gurugram (shock absorbers) Jay Bharat Maruti (Japan) Gurugram (pipes)
- JBM Sung Hoo (South Korea) Delhi (components) JBM Group Gurugram
- JMA Industries (Germany, Hella) Faridabad (lamps) Jay-Yusin (Japan) Gurugram (door latch)
- Jay Industries (South Korea, Boramtek) Delhi (components) Johnson Matthey (UK) Gurugram (catalysts)
- Johnson Matthey Manesar
- JNS Instruments (Japan) Gurugram (instruments) Krishna Maruti (Japan) Gurugram

(seats) Krishna Toyo (Japan) Gurugram (rear mirrors)

- Lumax GSHP (USA) Gurugram (transmission)
- Laser Lamp (South Korea, Il Lee corp.) Delhi/Haryana (halogene lamps) Machino Polymers (Montell int.) Gurugram (compound cables)
- Machino TSK Nippon Cables (Japan) Gurugram (cables) Machino Basell (Netherlands) Gurugram (polypropylene) Madhusudan Nippon (Japan, Korea, Deadong) Gurugram (cables) Manu Auto, Manesar
- Mark Auto Industries (Italy, Germany, FBN Italy, Roth Abgastechnologie) Gurugram (exhaust systems)
- Metro Tyers Gurugram
- Mindarika (Japan) Gurugram (switches)
- M and M Auto Industries Gurugram (springs) Montell int. Gurugram (compound cables)
- Munjal Showa (Japan) Gurugram (shock absorbers) Nagata (Japan) Gurugram (tools, dies)
- Napino Auto and Electronics Manesar Nelson Industries (USA) Delhi (engine parts) Nikko Auto (Japan) Gurugram (horns)
- Nippon Paint Gurugram (paint) Pilikington (UK) Gurugram
- Purolator (USA, Arvin Industries) Gurugram (filter) Quiton Hazell Gurugram (rods, joints, steering assembly)
- Rasandik Engineering (Japan, Yachiyo) Gurugram (fuel tanks) Roloform Manesar
- Roth Abgastechnologie Gurugram (exhaust systems) Sandhar Gurugram
- Sauer Danfoss, Gurugram Siemens Intron Gurugram
- Sono Koyo (Japan) Gurugram (steering) Sona Okegawa (Japan) Gurugram (gears)
- Sona Somic Lemforder (Japan/Germany) Gurugram (ball point) Sunbeam Auto (Japan, Honda) Gurugram (pistons)
- Sun Steering Wheels (Japan, TS Tech) Gurugram (steering wheels) Sun Petri (Germany) Gurugram (steering wheels)
- Suzuki (Japan) Motor-Bikes
- Talbros (UK, Quiton Hazell) Gurugram (rods, joints, steering assembly) Woodhead Gurugram (shock absorbers)
- WSCP Manesar

Textile

- Didi World of Fashion Express
- House of Pearl/Koutons Orient Craft

Besides there are more than 30 Large Scale Industries. Some prominent are given below

- M/S HERO MOTORS LTD., SECTOR-8, IMT MANESAR,(FERROUS ALLOY DIV.)-MOTORCYCLE PARTS
- M/S HEWETTS ASSOCIATES, DLF, GURUGRAM- INFORMATION TECHNOLOGY
- M/S MARUTI UDYOG LTD., IMT MANESAR, GURUGRAM- PASSEGER CARS
- M/S JINDAL STAINLESS STEELWAY LTD. VILLAGE PATHRERI, GURUGRAM- PIPES
- M/S COSCO INDIA LTD., RLY. ROAD, GURUGRAM- SPORT GOODS

Major Exportable Item:

Cars, scooters, motorcycles, rice, auto parts, leather products, handicraft item ,readymade garments and plastic parts etc.

Vendorisation / Ancillarisation of the Industry

Auto parts for two and four wheelers

Existing Clusters of Micro & Small Enterprise

Service Sector: Auto Workshop/Service Station, Mobile Repair , Computer Hardware, refrigeration & Air conditioning etc.

Cluster: Auto Rubber parts- Gasket, Seals, washers & V-belts etc.

Cluster: Readymade Garments manufacturing- Trousers, lowers, track suits, T-shirt etc.

Cluster: Auto Parts manufacturing- Piston, crank, rocker arm, sleeve etc.

Cluster: Leather Goods & Garments

Languages and dialect

The main language spoken in Gurugram is Hindi, though a segment of the population understands and speaks English. The dialect used in Hindi is similar to that of Delhi, and is considered neutral, though the regional influences from the states of Haryana, Uttar Pradesh and Punjab adds an accent to the language. English is spoken with an Indian accent, with a primarily North Indian influence. Since Gurugram has many international call centres, the employees are usually given formal training in neutral pronunciation in order to be understandable to native English speakers. Haryanvi and Punjabi are other popular languages spoken in the city.

Art and Culture

Gurugram offers a diverse array of experiences that cater to a wide range of interests and preferences. With its rich history, vibrant culture, and exciting entertainment options, the city promises an unforgettable and enriching journey for every visitor.

Places of Interest in Gurugram

Kingdom Of Dreams

A first of its kind of live entertainment in the country has been set up at Kingdom of Dreams, in the Sector-29, Gurugram.

The Kingdom of Dreams is a must-visit entertainment destination in Gurugram that perfectly blends Indian art, culture, and heritage. This majestic complex features a blend of modern and traditional architecture, with structures like the Nautanki Mahal, Culture Gully, and the Showshaa Theatre. The Nautanki Mahal hosts extravagant Bollywood-style musicals and theatrical performances, while Culture Gully showcases the diverse cuisines and handicrafts from different states of India. The Showshaa Theatre hosts various events, from stand-up comedy to live music performances, ensuring that there is always something exciting happening at the Kingdom of Dreams.

It is a unique cultural centre in itself. In this Opera theatre, one can have the glimpses of European countries, including Paris, America and England, in one place. There is a cultural

lane where glimpses of different traditions, food & dresses of different states of India are showcased. The food of Indian States is also served to the tourists.

Sheetala Mata Temple

One of the nine Shaktipeeths in the country is Sheetala Mata Devi in Gurugram.

The Sheetla Mata Mandir is dedicated to the Hindu goddess Sheetla Devi. This ancient temple is believed to have healing powers and attracts thousands of devotees from across the country. The serene atmosphere and beautiful architecture of the temple make it a must-visit destination for spiritual seekers and tourists alike. The Religious Temple pond, attracts huge crowd, the year around, especially during Navaratri, around Diwali festival. This temple holds melas two times a year in Chaitra and Ashadh months. The situation like Kumbh is experienced during these Melas.

Sheesh Mahal

Step back in time at the Sheesh Mahal, a beautiful 19th-century palace-turned-museum located in the heart of **Gurugram**. This architectural marvel showcases the royal heritage of Haryana, with intricate carvings, mirrored walls, and stunning frescoes adorning its interiors. The museum also houses a collection of artefacts, paintings, and photographs that offer a glimpse into the region's rich history and culture.

Museum of Folk and Tribal Art

One can delve into the fascinating history of Gurugram by visiting the Museum of Folk and Tribal Art. This museum showcases the rich cultural heritage of various Indian tribes and folk communities, providing a unique insight into their lifestyles, customs, and traditions. With a vast collection of artefacts, paintings, sculptures, and textiles, the museum offers an immersive experience for history and art enthusiasts alike.

Heritage Transport Museum

The Heritage Transport Museum is a must-visit attraction for automobile enthusiasts and history buffs. This one-of-a-kind museum showcases the evolution of transportation in India, with a vast collection of vintage cars, motorcycles, buses, aircraft, and even bullock carts. The museum also features interactive exhibits, allowing visitors to engage with the displays and learn about the fascinating history of transportation in the country.

Sultanpur National Bird Sanctuary

In Gurugram district 46 kilometres from the Capital Delhi, is the Sultanpur National Bird Sanctuary on the Gurugram-Farukhnagar Road. There is also an ancient lake here spread over about 265 acres of land. National & International tourists visit this Place.

The Sultanpur National Park is a haven for nature lovers and birdwatchers. This lush park is home to a variety of migratory and resident bird species, including the Siberian crane, greater flamingo, and purple sunbird. The park also features several walking trails, watchtowers, and a well-equipped visitor centre, making it an ideal getaway for those seeking respite from the bustling city.

Aravalli Biodiversity Park

The Aravalli Biodiversity Park is a unique combination of art, nature, and conservation. Spread across 380 acres, this park is home to a variety of flora and fauna native to the Aravalli Range. The park also features several art installations and sculptures created by renowned artists, adding a creative touch to the natural surroundings. With well-

maintained walking and cycling trails, the Aravalli Biodiversity Park is an excellent destination for a rejuvenating outdoor experience.

Ambience Mall

No visit to Gurugram is complete without indulging in some retail therapy at the Ambience Mall. This expansive shopping complex features a diverse range of local and international brands, catering to every fashion and lifestyle preference. The mall also houses a variety of dining options, a multiplex cinema, and an entertainment zone, making it a one-stop destination for a fun-filled day out with family and friends.

Local Cuisine at the Sector 29 Market

The Sector 29 Market is a gastronomic paradise for **food lovers visiting Gurugram**. This bustling market is packed with an array of eateries, offering everything from delectable street food to fine-dining experiences. Sample mouthwatering dishes like chaat, kebabs, and momos, or indulge in a delicious North Indian meal at one of the many restaurants. The market also features a range of pubs and bars, making it a lively nightlife destination.

Cyber Hub

The Cyber Hub is a popular dining and entertainment destination in Gurugram, offering a diverse range of restaurants, cafes, and bars. This lively venue is perfect for food lovers looking to savour flavours from around the world, with options ranging from Italian and Japanese to Indian and Mediterranean cuisines. The Cyber Hub also hosts various live music and cultural events throughout the year, making it a vibrant and bustling hotspot in the city.

Flyboy Aero Park

One can get adrenaline pumping at the Flyboy Aero Park and can indulge in thrilling adventure sports like paramotoring, ziplining, and off-road biking. This recreational park offers a unique opportunity to experience the joy of flying to soar through the sky, taking in breathtaking views of Gurugram's skyline.

Classic Golf and Country Club

Golf enthusiasts visiting Gurugram can enjoy a round at the Classic Golf and Country Club, a sprawling golf resort nestled in the picturesque Aravalli Range. This 27-hole championship golf course, designed by Jack Nicklaus, offers a challenging yet enjoyable experience for both amateurs and seasoned golfers. The club also features a luxurious clubhouse, swimming pool, and fine-dining restaurant, ensuring a memorable day out on the greens.

Leisure Valley Park

The Leisure Valley Park is an urban oasis in the heart of Gurugram, offering a serene setting for visitors looking to escape the hustle and bustle of the city. Spread across 101 acres, the park features lush green lawns, well-maintained gardens, and a picturesque lake. The park also hosts various cultural events and festivals throughout the year, making it a vibrant and lively destination for locals and tourists alike.

SMAAASH Gaming Centre

For a fun and immersive entertainment experience, head to the SMAAASH Gaming Centre. This state-of-the-art gaming hub offers a variety of virtual reality games, arcade games, and simulators that cater to all age groups. With exciting activities like go-karting, bowling, and trampoline parks, the SMAAASH Gaming Centre guarantees a thrilling day out for the entire family.

Neverenuf Garden Railway

The Neverenuf Garden Railway is a unique attraction that transports visitors to a miniature world set amidst a beautiful garden landscape. This charming venue features a model railway village, complete with intricately detailed miniature buildings, landscapes, and working trains. Visitors can also engage in interactive activities like treasure hunts and boat-making workshops, making it a delightful experience for both children and adults.

Mostly the study area is under agriculture.

The Anticipated Impacts of the Expansion Project on Society

There will be positive impact of the project in the area as mentioned below:

- Employment opportunities, both direct and indirect will be increased
- Communication and transport facilities are expected to improve.
- Education facilities will improve
- Medical facilities are likely to improve
- Cultural & sports activities and improvement of social welfare

The socio-economic status of the local people will improve substantially due to additional employment generation. The land rates will improve in the nearby areas due to the proposed expansion activity.

Educational institutions will also come up and will lead to an improvement in the educational status of the people in the area.

Primary health centers and medical facilities will certainly improve due to the proposed expansion of the project.

The proposed project will result in growth of the surrounding areas by increasing ancillary development and supporting infrastructure. State will get revenues in terms of taxes. Business opportunities for the local community will be available like transport, maintenance & house-keeping contract work etc.

The project will need additional several skilled workers. Besides several semiskilled and unskilled workers will also be required for peripheral activities like transport, logistics, engineering, services, commercial services etc.

The unskilled labor will be deployed from local area only.

CSR/CER ACTION PLAN PROPOSED

1. More emphasis on Education specially job-oriented skill development of the youth. Training arrangements will be made to empower youth with skills so that they can take up their own business.
2. Girl Education. BETI BACHAO AND BETI PARAHO considering the gender inequality. Study material, scholarship will be provided to the needy girls, the deserving girls may be sponsored for higher education.
3. Employment generation activities by forming SELF HELP GROUPS.
4. Contribution towards Maintenance of Roads /Schools/ Temples/Primary hospitals including value addition in terms of public facilities.

5. CER will be dealt with as per EC conditions granted by MoEF&CC.

The budget with the proposed activities will be finalized along with consultation of the local authorities.

Opinion of the People of Surrounding Area Regarding Project

People feel that the project will have very much positive impact on their lives. The project will give them employment, infrastructural development including better living conditions & hope for better future. PP will address the issues of poverty, unemployment etc. under its CSR policies in nearby areas for meeting the social demand. People have positive opinion regarding the project & feel that the project will continue peripheral developmental activities besides CSR & CER activities.

3.14 ECOLOGY AND BIODIVERSITY

Methodology Adopted for the Study of Flora and Fauna

Core Zone: Project site

Buffer Zone: 10 km radii w.r.t. project site

Floral Diversity of the Study Area

The objective of this floral inventory of the study area is to provide necessary information on floristic structure in the study area for formulating effective management and conservation measures. The climatic, edaphic and biotic variations with their complex interrelationship and composition of species, which are adapted to these variations, have resulted in different vegetation cover, characteristic of each region (Ohasi, 1975).

Trees: Total 36 species of trees belong to 19 families are enumerated from the study area. List of trees found in study area is given in table below.

Table 3-16 List of Trees in the Study area

S. NO.	FAMILY AND SCIENTIFIC NAME	VERNACULAR NAME
1	**Mimosaceae**	
1/1	*Acacia nilotica*	Kikar
2/2	*Acacia senegal*	Kumat
3/3	*Acacia leucophloea*	Safed babul
4/4	*Albizia lebbeck*	Kala Siras
5/5	*Albizia procera*	Safed Siris
6/6	*Prosopis cineraria*	Khejri
7/7	*Prosopis juliflora*	pahari kikar
2	**Apocynaceae**	
8/1	*Alstonia scholaris*	Chativan
3	**Boraginaceae**	
9/1	*Cordia dichotoma*	Lasora
10/2	*Cordia myxa*	Chota Lasora
4	**Rubiaceae**	
11/1	*Anthocephalus cadamba*	Kadamb

S. NO.	FAMILY AND SCIENTIFIC NAME	VERNACULAR NAME
5	**Meliaceae**	
12/1	*Azadirachta indica*	Neem
13/2	*Melia azedarach*	Bakain
6	**Fabaceae**	
14/1	*Butea monosperma*	Dhaak
15/2	*Leucaena leucocephala*	Subabool
7	**Caesalpiniaceae**	
16/1	*Cassia fistula*	Amaltas
17/2	*Parkinsonia aculeata*	Ram babul
18/3	*Delonix regia*	Gulmohar
19/4	*Tamarindus indica*	Imli
8	**Capparaceae**	
20/1	*Crataeva adansonii*	Barna
9	**Moraceae**	
21/1	*Ficus glomerata*	Gular
22/2	*Ficus religiosa*	Peepal
23/3	*Morus indica*	Shahtut
24/4	*Ficus benghalensis*	Barh
10	**Oleaceae**	
25/1	*Nyctanthes arbor-tristis*	Harsingar
11	**Tamariscineae**	
26/1	*Tamarix articulata*	Farash
12	**Verbenaceae**	
27/1	*Tectona grandis*	Sagon
13	**Combretaceae**	
28/1	*Terminalia arjuna*	Arjun
14	**Papilionaceae**	
29/1	*Dalbergia sissoo*	Shisham
15	**Myrtaceae**	
30/1	*Eucalyptus hybrid*	Eucalyptus
31/2	*Psidium guajava*	Amrud
16	**Moringaceae**	
32/1	*Moringa oleifera*	Saijan
17	**Mimosaceae**	
33/1	*Prosopis cineraria*	Khejri
34/2	*Prosopis juliflora*	pahari kikar
18	**Leguminosae**	
35/1	*Saraca indica*	Sita ashok
19	**Rhamnaceae**	
36/1	*Zizyphus mauritiana*	Ber

Shrubs: Total 24 species of Shrubs belong to 21 families are enumerated from the study area. List of Shrubs in the study area is provided in table below.

Table 3-17 List of Shrubs in the Study area

S. NO.	FAMILY NAME & SCIENTIFIC NAME	VERNACULAR NAME
1	**Fabaceae**	
1/1	*Acacia jacquemontii*	Babool
2	**Apocynaceae**	
2/1	*Thevetia peruviana*	Pili Kaner
3	**Euphorbiaceae**	
3/1	*Ricinus communis*	Arand
4/2	*Ricinus communis*	Castor
4	**Rhamnaceae**	
5/1	*Ziziphus nummularia*	Mallah
5	**Punicaceae**	
6/1	*Punica granatum*	Anar
6	**Mimosaceae**	
7/1	*Prosopis juliflora*	Prosopis
7	**Annonaceae**	
8/1	*Polyalthia longifolia*	Druping Ashok
9/2	*Annona squamosa*	Sita Phal
8	**Caricaceae**	
10/1	*Papaya coorge*	Papeeta
9	**Musaceae**	
11/1	*Musa sapientum*	Kela
10	**Asclepiadoideae**	
12/1	*Leptadenia pyrotechnica*	Khip
11	**Asparagaceae**	
13/1	*Asparagus racemosus*	Shatawar
12	**Solanaceae**	
14/1	*Datura wrightii*	Dhutura
13	**Palmae**	
15/1	*Phoenix acaulis*	Dwarf Date Palm
14	**Malvaceae**	
16/1	*Hibiscus rosa-sinensis*	Gudhal
15	**Verbenaceae**	
17/1	*Duranta repens*	Duranta
16	**Rutaceae**	
18/1	*Citrus medica*	Neebu
17	**Caesalpiniaceae**	
19/1	*Cassia tora*	Panwar
18	**Apocynaceae**	
20/1	*Carissa spinarum*	Hins
21/2	*Carissa carandus*	Karaunda

S. NO.	FAMILY NAME & SCIENTIFIC NAME	VERNACULAR NAME
19	**Capparaceae**	
22/1	*Capparis decidua*	Karir
20	**Polygonaceae**	
23/1	*Calligonum polygonoides*	Phoa
21	**Papaveraceae**	
24/1	*Argemone maxicana*	Brhamadandi

Herbs: Total 18 species of Herbs belong to 12 families are enumerated from the study area. List of Herbs in the study area is provided in table below:

Table 3-18 List of Herbs in the Study Area

S. NO.	FAMILY NAME & SCIENTIFIC NAME	VERNACULAR NAME
1	**Acanthaceae**	
1/1	*Adhatoda vasica*	Bansa
2/2	*Andrographis paniculata*	Kalmegh
2	**Cucurbitaceae**	
3/1	*Citrullus colocynthis*	Indirain
3	**Solanaceae**	
4/1	*Datura stramonium*	Dhatura
5/2	*Solanum nigrum*	Makao
4	**Cannabaceae**	
6/1	*Cannabis sativa*	Bhang
5	**Poaceae**	
7/1	*Saccharum bengalense*	Kana
8/2	*Cenchrus ciliaris*	Anjan
9/3	*Cenchrus setigerus*	Dhamanq
10/4	*Cynodon dactylon*	Bermuda grass
6	**Lamiaceae**	
11/1	*Oscimum basilicum*	Kali Tulsi
7	**Apocynacae**	
12/1	*Catharanthus roseus*	Sadabahar
8	**Fabaceae**	
13/1	*Mimosa pudica*	Lajwanti
14/2	*Desmodium triflorum*	Creeping Tickfoil
9	**Menispermaceae**	
15/1	*Tinospora cordifolia*	Glo
10	**Malvaceae**	
16/1	*Sida acuta*	Kharuthi
11	**Zygophyllaceae**	
17/1	*Tribulus terrestris*	Bhakhra
12	**Asteraceae**	
18/1	*Ageratum conyzoides*	Chick weed

Faunal Diversity of the Study Area

There was no endangered species observed during faunal survey, list of fauna detail summarized in table below.

Table 3-19 List of Mammals in the Study Area

S. NO.	SCIENTIFIC NAME	ENGLISH NAME	SCHEDULE AS PER WPA 1972
1.	*Herpestes edwardsi*	Common mongoose	Schedule II
2.	*Funambulus penanti*	Three striped squirrel	Schedule IV
3.	*Rattus rattus*	Common house Rat	Schedule V
4.	*Mus musculus*	Common mouse	Schedule V
5.	*Chiroptera*	Bat	Schedule V
6.	*Boselaphus tragocamelus*	Blue Bull	Schedule III
7.	*Felis chaus*	Jungle Cat	Schedule II
8.	*Canis aureus*	Indian Jackal	Schedule II
9.	*Scotophilus heathi*	Common yellow bat	Schedule V

Table 3-20 List of Reptiles in the Study Area

S. NO.	SCIENTIFIC NAME	COMMON NAME	SCHEDULE AS PER WPA 1972
1.	*Uromastyx hardwickii*	Sanda	Schedule II
2.	*Ptyas mucosa*	Yellow rat snake	Schedule II
3.	*Lampropholis guichenoti*	Common Skink	-
4.	*Calotes versicolor*	Common Garden Lizard	-

Table 3-21 List of Birds in the Study Area

S. NO.	SCIENTIFIC NAME	ENGLISH NAME	SCHEDULE AS PER WPA 1972
1.	*Acridotheres fuscus*	Jungle Myna	Schedule IV
2.	*Bubulcus ibis*	Cattle egret	Schedule IV
3.	*Corvus splendens*	House Crow	Schedule V
4.	*Centropus sinensis*	Greater coucal	Schedule IV
5.	*Acridotheres tristis*	Common Maina	Schedule IV
6.	*Dicrurus adsimilis*	Black Drongo	Schedule IV
7.	*Lonchura punctulata*	Indian spotted munia	Schedule IV
8.	*Nectarinia asiatica*	Indian purple sunbird	Schedule IV
9.	*Streptopelia senegalensis*	Little Brown Dove	Schedule IV
10.	*Treron phoenicoptera*	Common Green Pigeon	Schedule IV
11.	*Megalaima zeylanica*	Northern green barbet	Schedule IV
12.	*Turdoides caudatus*	Common Babbler	Schedule IV
13.	*Ploceus philippinus*	Baya Weaver Bird	Schedule IV
14.	*Motacilla maderaspatensis*	Pied Wagtail	Schedule IV
15.	*Halcyon smyrnensis*	White breasted kingfisher	Schedule IV
16.	*Pycnonotus cafer*	Red Vent Bulbul	Schedule IV

17.	*Himantopus himantopus*	Black-winged Stilt	Schedule IV
18.	*Pavo cristatus*	Peafowl	Schedule I
19.	*Passer domesticus*	House Sparrow	Schedule IV
20.	*Psittaciformes sps.*	Parrot	Schedule IV

Interpretation of EB Data:

The village groves and existing vegetation in the area serve as habitats for a small number of wildlife species. The wildlife present primarily consists of common mammals, birds, and reptiles. These animal species are known to inhabit areas alongside human settlements and have a relatively wide distribution. However, the natural vegetation in the study area is in a degraded state, and the density of wild mammals is notably low. Despite this, peafowl are prevalent in the region. To ensure the preservation of schedule-I species, a conservation plan has been prepared and copy of the same is enclosed as **Annexure.**

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CHAPTER-4 : ANTICIPATED ENVIRONMENTAL IMPACT AND ITS MITIGATION MEASURES

4.1 INTRODUCTION

4.1.1 Objective

Any developmental activity in its wake will bring about some impacts associated with its origin, which can be broadly classified as reversible, irreversible, long and short-term impacts. In this chapter, an endeavor has been made to identify various Environmental Impacts associated with the plant construction, operation and other activities wherein, there may be a chance of pollution. Based on the possible worst case emissions and waste generation from the proposed project and also taking into consideration the baseline environmental status at the proposed project site and surroundings, the environmental factors that are likely to be affected (Impacts) are assessed and identified.

Both beneficial (positive) and detrimental (negative) impacts are accounted for this purpose. The prediction of impacts helps in the preparation of a sound Environmental Management Plan which has to be executed during the on-going activities for the proposed project to minimize the adverse impacts on the environmental quality. In some case, mathematical models were used to quantitatively describe the cause-effect relationships between the sources of pollution and different components of environment. In case if the mathematical models are not available or it is not possible to identify/validate a model for particular situation, predictions would be made through available scientific knowledge.

The potential impacts on the environment from the proposed project are identified based on the nature of the various activities associated not only with the project implementation and operation, but also on the current status of the environmental quality.

The objectives of impact identification are as follows:-

- To ensure compliance with regulations
- To provide a comprehensive coverage of a full range of impacts, including social, economic and physical
- To distinguish between positive and negative, large and small, long term and short term, reversible and irreversible impacts
- To identify secondary, indirect and cumulative impacts as well as direct impacts and
- To consider impacts within the constraints of an area's carrying capacity.

4.1.2 Identification of Impacts

Pollutants generated from the development of the project during both the construction and operational phase will be solid, liquid and gaseous in nature. Also, the generation of pollution could be continuous, periodic or accidental. Sources of pollutants and their characteristics during the construction and operation phase are given below in **Table 4-1.**

Table 4-1 Pollution Sources

S. No.	Activity/Area	Pollutant	Pollutant Characteristics	Frequency
CONSTRUCTION PHASE				
1.	Ground excavation and leveling	Air emissions: PM_{10}, $PM_{2.5}$ CO, NOx, SO_2	Dust from construction Activities and excavation. Particulates, NOx and CO from vehicle exhaust	It was temporary during the Construction phase Only-bulk of the emissions are expected from ground working and leveling activities.
		Earth / solid waste	Solid waste from Construction activity and excavation.	Periodic.
		Noise	Noise generatedfrom construction equipment and machinery	It will be Temporary during the initial construction phase.
2.	Labour Camps	Sewage	Sewage generated from temporary labour camps on site	It will be Temporary – during the initial construction phase
		Solid Waste	Solid Waste generated from temporary labour camps on site	It will be Temporary – during the initial construction phase
OPERATION PHASE				
1.	Vehicular movement	Air emissions and noise	Vehicle exhaust emissions	Continuous/ Periodic
2.	Diesel power Generators	Air emissions	SO_2, NOx, PM, CO from fuel burning	Continuous
		Noise	Noise due to running of Equipment	Continuous
		Hazardous waste	Used Oil Generation	Periodic,during oil changes
3.	Domestic use	Wastewater		Continuous
		Domestic Solid waste	Garbage / Food waste	Continuous
4.	Project area including common toilets	Sewage	Domestic wastewater	Continuous
		Domestic Solid Wastes	Bio-degradableand non-biodegradable wastes	Continuous–small quantities
5.	Diesel Storage	Solid waste	Settled sludge during tank cleaning	Occasional

6.	Maintenance/ housekeeping	Wastewater	Floor washing	Continuous
		Solid waste	Used equipment parts and garden wastes	Continuous
7.	Vehicle Parking Area	Oil Spills	Minor oil leaks in parking lot	Continuous–small quantities
8.	Storm water drain	Wastewater	Contamination discharge from site – Mainly suspended solids	During rainy season

4.2 IMPACT IDENTIFICATION

The primary function of an environmental impact assessment study is to predict and quantify potential impacts, assess and evaluate the magnitude and their importance in order to develop an environmental management plan to mitigate the impacts. Environmental impacts could be positive or negative, direct or indirect, local or regional and also reversible or irreversible. The areas of environmental concern for which the impacts and their predictions are taken into consideration are mainly:

- Air Environment
- Water Environment
- Noise Environment
- Land Environment
- Biological Environment
- Socio economic Environment

The impacts can be further categorized as positive impacts and negative impacts depending upon their nature, potential and magnitude.

This chapter discusses the incremental environmental impacts on the environmental parameters during the construction and operation phases of the project. The potential impacts have been identified in Table 4-2. The mitigation measures for the adverse impacts are discussed in Chapter 6.

Table 4-2 Identification of potential impacts during construction & operation phase

S. No	Components	Aspect	Potential Impact
Construction Phase			
1	Ambient Air Quality	Dust emissions from site preparation, excavation, material handling and other construction activities at Site.	Minor negative impact inside the premises. No negative impact outside project site. Short term
2	Noise	Noise generated from construction activities, operation of construction Equipment and traffic.	Minor negative impact near noise generation sources inside premises.

			No significant impact on ambient noise levels at sensitive receptors. Short term
3	Water quality	Surface runoff from project site Oil/fuel and waste spills. Improper debris disposal Discharge of sewage from labour camp.	No significant negative impact. Short term
4	Landuse and Aesthetics	Land development	Minor positive impact
5	Topography& Geology	Site development	No Significant Impacts
6	Soil	Construction activity leading to Topsoil removal and erosion.	Minor negative impact
7	Ecology Flora & Fauna	Habitat disturbanceduring construction activity	Minor negative impact short term
8	Socio-economy	Increased job opportunity for locals. Economy related to commercial real estate development, material supply etc. expected to boom.	Overall positive impact
9	Traffic Pattern	Truck movement and possibility of traffic congestion outside site on Gurugram Faridabad Road	Minor negative impact
OPERATION PHASE			
1	Ambient Air Quality	Particulate and gaseous emissions from DG sets and vehicle movement	Minor Negative impact
2	Noise	Noise from vehicle movement and operation of diesel generator sets during power failure.	Minor negative impact inside premises. No significant impact at sensitive receptors.
3	Water Quality	Oil/fuel and waste spills. Discharge of sewage. Discharge of contaminated storm Water	No significant adverse impact
4	Water usage	Use of fresh water at peak demand	Minor negative impact
5	Soil	Storage and disposal of solid and hazardous wastes Discharge of sewage Fuel and material spills Pesticides use	No negative impact

6	Ecology Flora & Fauna	Landuse change Discharge of wastewater to surface water bodies	No negative impact
7	Socio-economy	Increased job opportunity	Overall positive impact
8	Traffic Pattern	The proposed project will increase the load to predicted traffic during peak hours.	Moderate Negative Impact

4.2.1 Environmental Aspects of Development & Construction Operation

- Generation, storage and disposal of construction wastes
- Noise pollution from project site, machinery, equipment's and vehicle movement
- Air pollution from project site, machinery, equipment and vehicle movement
- Generation and discharge of wastewater
- Impact on ecology
- Consumption of resources such as water, electricity, and diesel
- Physical change in landscape due to earth work excavation and related activities
- Soil erosion caused due to loss of vegetation and other construction activities

4.2.2 Environmental Aspects of Operation Phase

- Discharge of Sewage Water
- Disposal of Solid Waste generated
- Increase in noise level due to transport & running of vehicles.
- Consumption of water and impact on water resources
- Impact on traffic
- Storm water during rains

Various activities from the proposed project are likely to have some negative as well as positive impact on the environmental constituents during its construction as well as operational phase. The impact assessment matrix given below in Table 4.3 reveals the impact associated with each activity of the project on various environmental parameters during construction and functional phase respectively before any mitigation measures are implanted. To assess the severity of the impacts, they are categorized as follows:



Table 4-3 Potential Environmental Impacts of the Project

Environmental Parameters	Nature of Potential Impacts during Operation Phases										
	Local	Regional	Short Term	Long Term	Reversible	Irreversible	Adverse	Beneficial	No Impact	Significant	Insignificant
Topography	√								√		
Drainage	√								√		
Soil	√								√		
Water Resources	√		√		√		√				√
Water Quality	√								√		
Land Use	√			√		√		√		√	
Air Quality	√		√		√		√				√
Noise	√		√		√		√				√
Flora	√			√		√		√		√	
Fauna	√			√		√		√		√	
Employment	√			√		√		√		√	

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4.3 ASSESSMENT OF THE ENVIRONMENTAL IMPACTS DURING CONSTRUCTION & OPERATION PHASE

4.3.1 Land Environment

Anticipated Impacts

During Construction Phase: In the project site, soil will be excavated from the project location for road construction as well as for other infrastructure services. During the disposal of redundant overburden, soil of filling area will be covered and lost permanently. Impact on the natural drainage system will also be there.

During the operation phase: The soil may get polluted/ contaminated from littering of various kinds of waste generated within the project such as food items, paper, wood pieces, paints, pesticides, oil & grease etc. However, owing to the proposed solid waste management system, no significant impact is anticipated.

Mitigation Measures:

- The soil excavated during construction will be first temporarily stored in an area earmarked and then used to fill up low lying area in and around the project and rest of the soil will be transported by road to fill up low lying areas elsewhere
- Proper drainage system will be provided to deal with the storm water in case of rain. The impact on soil during construction phase will be marginal and reversible in the nature
- It is proposed to remove vegetative cover only from the specific site on which construction is to take place and allowing minimal disturbance to the vegetation in adjacent areas
- Land clearing activities will be confined only to necessary areas. The top soil will be stripped from construction areas and stockpiled for later reuse in landscaping
- The number, frequency and area of movement of heavy machinery will also be restricted.

During Operation Phase: to ensure against any chances of soil pollution, it is imperative to establish a well-planned solid waste collection system covering all areas of the project site. An identified area was designated for storage and segregation of the wastes which will be treated/ disposed.

4.3.2 Water Environment

Surface Water Quality

No significant impact is anticipated as there is no water body in the vicinity of the project site. Therefore, no mitigation measures are suggested during Construction & Operational Phase of the project.

Ground Water Quality

Anticipated Impact:

During development and construction phase: No hazardous chemical and material will be used in the project. Debris and wastes generated during this phase will be collected and disposed suitably. Therefore, possibility of contamination of ground water will be negligible. Hence, no impact is anticipated on the ground water quality during the construction phase.

During Operational Phase: The storm water from the site will be used for recharging groundwater resources after adequate treatment of the storm water through oil, grease traps and filtration. The wastewater of 2376 KLD (1472 KLD from Residential, Commercial & Community plots and 904 KLD from Industrial Plots) from the site is proposed to be used for landscaping and flushing after adequate treatment in Sewage Treatment plant. Hence, no adverse impact is anticipated on the groundwater quality from the project.

Mitigation Measures:

A well-planned solid waste management plan will be followed during the construction phase including timely collection, segregation and disposal as per legal requirements.

Best Solid waste management practices will be adopted and followed to prevent groundwater pollution.

4.3.3 Air Environment

Air Emissions Sources

Emissions Source: The potential sources of air emission during the construction phase of the project are as follows:

- Dust from earth works (during site clearance and preparation)
- Emissions from the operation of construction equipment and machines
- Fugitive emissions from vehicles running to site
- Fugitive emissions during the unloading of material at the site
- Air emissions other than dust arise from combustion of hydrocarbons. The pollutants of concerns are NO_2, SO_2, CO, particulate etc.

Prediction of Impacts

Vehicular emissions and DG set emissions are the major sources of air pollution. During Operation phase, cars, scooter/motorcycle will be owned by the residents of colony. Ground Level Concentration of pollutants (as added by the project) will depend upon the following:

- Emission of pollutants from additional traffic on the roads due to the project
- Meteorological conditions
- Emission sources from D.G. Sets

PM, NO_2, SO_2 and CO will be the main pollutants of primary concern released from traffic movement, DG sets emissions. The dispersion of vehicular emissions would be confined within limited distance from the road and concentration will decrease with the increase in distance from road as worked out by the line source model. It was anticipated that the

contribution of vehicular emissions from the exhaust in ambient air quality will be marginal as Pollution Under Control (PUC) Certified vehicles and branded vehicles with low sulphur diesel will be used. Ground Level Concentration (GLC) of pollutants is found to be well within the stipulated National Ambient Air Quality Standards due to traffic movement and vehicles used inside the premises. Air modeling for DG set using AERMOD Cloud Version 18 has been done for prediction of impacts caused by DG sets operation during Operation Phase. Stack & emission data was used as per design value provided by standard make and stipulated standards. Other primary data used as input for model were hourly meteorological data of Wind speed & direction, temperature, cloud amount and mixing height. Mixing height used in the model was taken from secondary data source "Atlas of Hourly Mixing Height Assimilative Capacity of Atmosphere in India published in 2008 by IMD, Delhi". Hourly meteorological monitored at site during study period data was compared with long term data available from the nearest IMD Station.

There is provision of 2no. of DG set of total capacity 1100kVA for Commercial Facility which includes 1 x 750kVA +1x 350 kVA and 2no. of DG set of total capacity 1750 kVA for Common Services which includes 1 x 750kVA +1x 1000 kVA are proposed for power back up. The DG sets will be equipped with acoustic enclosure to minimize noise generation and adequate stack height for proper dispersion.

In the project, D.G. set will be used only during power failure and low sulphur diesel will be used as fuel to minimize SO_2 emission. Incremental load in the ambient air environment will be found to be very low as given in the report. An adequate stack height for D.G. sets is proposed as per the stipulated guidelines of Central Pollution Control Board (CPCB)/ National Building Code Manual to facilitate adequate dispersion of pollutants and to minimize the impact on Ambient Air Quality under the influence of local meteorology.

Meteorology – Hourly Meteorological data of wind speed & direction, temperature, cloud amount and rainfall were monitored at site for 3months for the dispersion model. Wind rose was prepared in sixteen directions as per standards. It was observed that wind direction from East to West and during the study period. Average wind speed was 4.0 m/s during study period.

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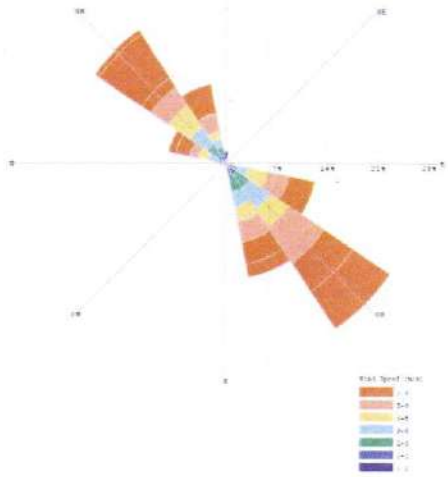


Figure 4-1 Windrose Diagram

Model details and Framework of Computation:

The predictions for air quality during operation phase was carried out using CPCB/MoEFCC approved USEPA, Industrial Source Complex (AERMOD Cloud Version 18) Dispersion model developed by the US Environmental Protection Agency (USEPA) for prediction of pollutants dispersion from single or multiple point sources using emission and hourly meteorological data of the study period. Assumption used in the model was as follows:

The plume rise is limited to that of the mixing layer as published by IMD in the Catalogue of Atlas of Mixing Heights in India for the site:

- Stack down wash is not considered.
- Flat terrain is used for computations.
- It is assumed that the pollutants do not undergo any physico-chemical transformation
- Chemical and scavenging process occurred in the atmosphere in the pollutants released at the stack exit is not considered.
- Prediction is based on single/multiple point sources, pollution released at stack exit and dispersed on the ground under influence of local meteorological conditions during the season.

AERMOD Cloud Version 18 was used to predict GLC caused by a single point source (1 stack) at each receptor of 100 m x 100 m of grid network covering total area of 2000 m x 2000 m around the proposed source with stack & emission values and 1-hourly meteorological data. It was observed that SO_2, NO_2, CO, PM_{10} & $PM_{2.5}$ were significant pollutants released from the fuel of the D.G. sets. Emission of PM_{10}, $PM_{2.5}$, CO and SO_2 were found insignificant with low values. In this proposed project, NO_2 was the worst affected pollutant released into the atmosphere. 24-h GLC were predicted for SO_2, NO_2, CO and PM.

Table 4-4 DG Stack and Emission Details

Stack No.	DG set Capacity (kVA)	Stack & Flue details				Pollutants Emission				
		Height (m)	velocity (m/s)	Temp (K)	Dia (m)	NO_2 (g/s)	SO_2 (g/s)	PM_{10} (g/s)	$PM_{2.5}$ (g/s)	CO (g/s)

1.	2*750	30	25	773	0.332	0.274	0.006	0.0075	0.015	0.063
2.	1*350	30	25	773	0.176	0.595	0.0013	0.003	0.002	0.0136
3.	1*1000	30	25	773	0.271	0.084	1.148	1	0.64	0.04
Total Emission in g/s from 4no. of DG sets of total capacity 2850 kVA [(2 x 750 + 1 x 350 + 1 x 1000 kVA)]						0.953	1.155	1.0105	0.657	0.116

Discussion of Results

AERMOD - Dispersion model was used to predict GLC of all pollutants; SO_2, NO_2, PM_{10}, $PM_{2.5}$ and CO with stack & emission and hourly meteorological data. 24-hours average maximum Incremental GLC of NO_2, SO_2, PM_{10}, $PM_{2.5}$ and CO were 0.66 µg/m³, 0.07µg/m³, 0.68µg/m³, 0.43 µg/m³ & 0.73 µg/m³, occurred respectively at (700m distance) from the DG sets occurred at the same distance. It was found that GLC of SO_2 was less than the permissible limit of 80µg/m³ (as per CPCB guidelines) under worst meteorological condition with meteorological data monitored from 1st Dec,2023 to 29th Feb 2024.

Conclusion

High to moderate wind speed and minimum stack height of 30 m facilitates dispersion at the distance of 500 m under the influence of local meteorology.

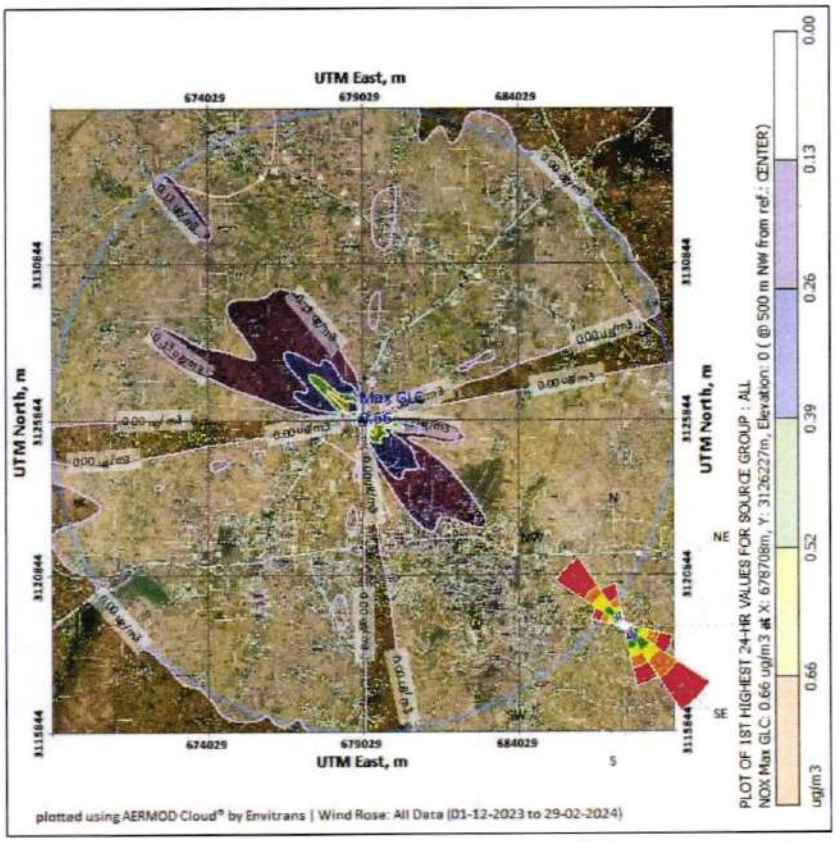


Figure 4-2 Spatial distribution of 24-hours average NO_2 concentrations (µg/m³)

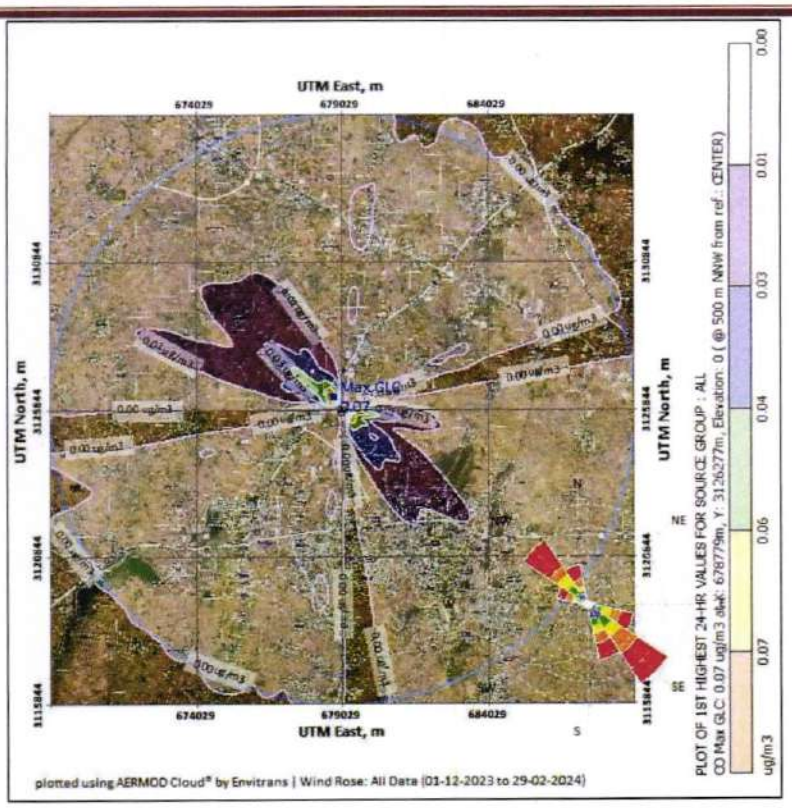


Figure 4-3 Spatial distribution of 24-hours average CO concentrations (µg/m³)

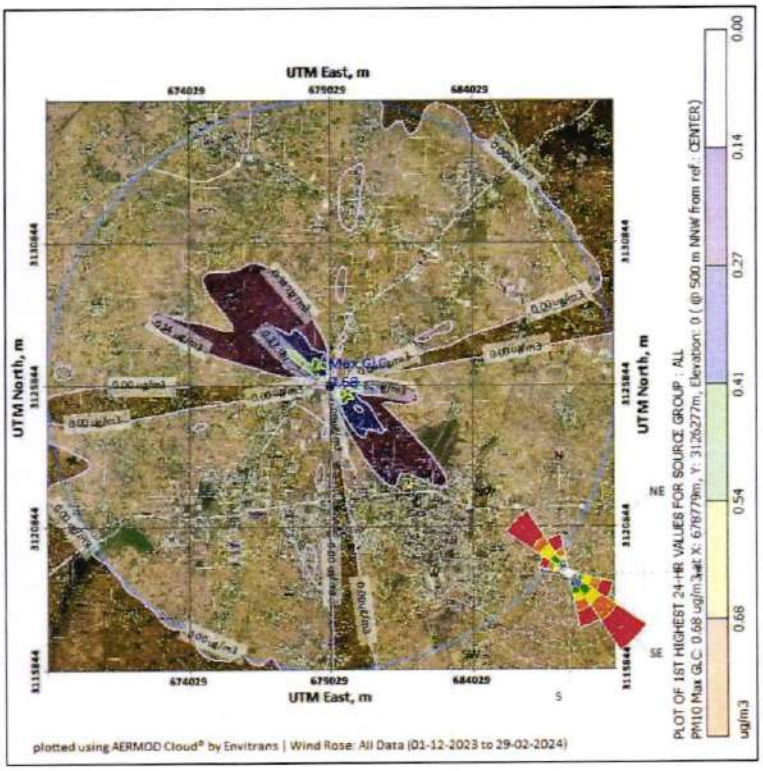


Figure 4-4 Spatial distribution of 24-hours average PM_{10} concentrations (µg/m³)

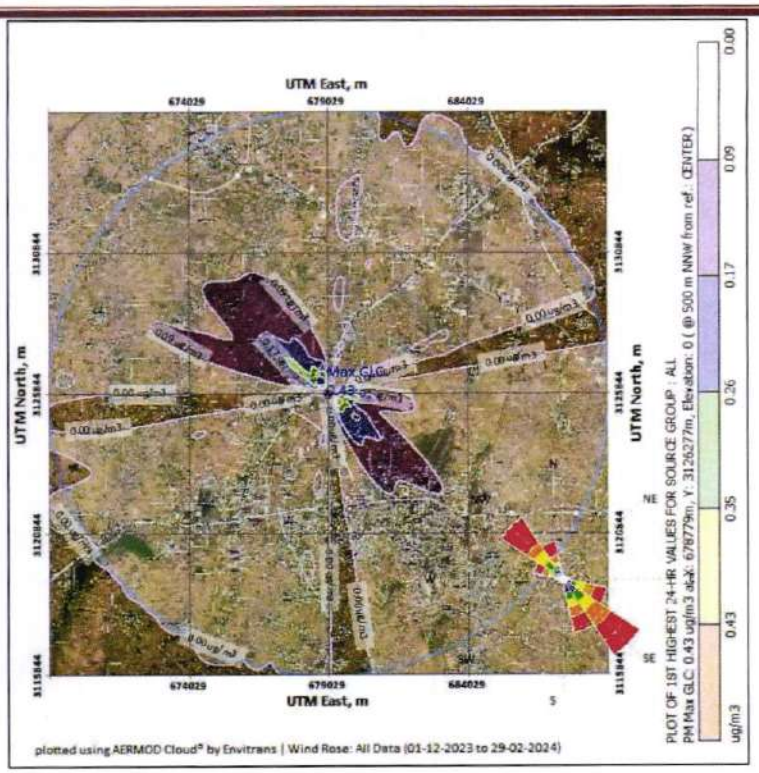


Figure 4-5 Spatial distribution of 24-hours average $PM_{2.5}$ concentrations (µg/m³)

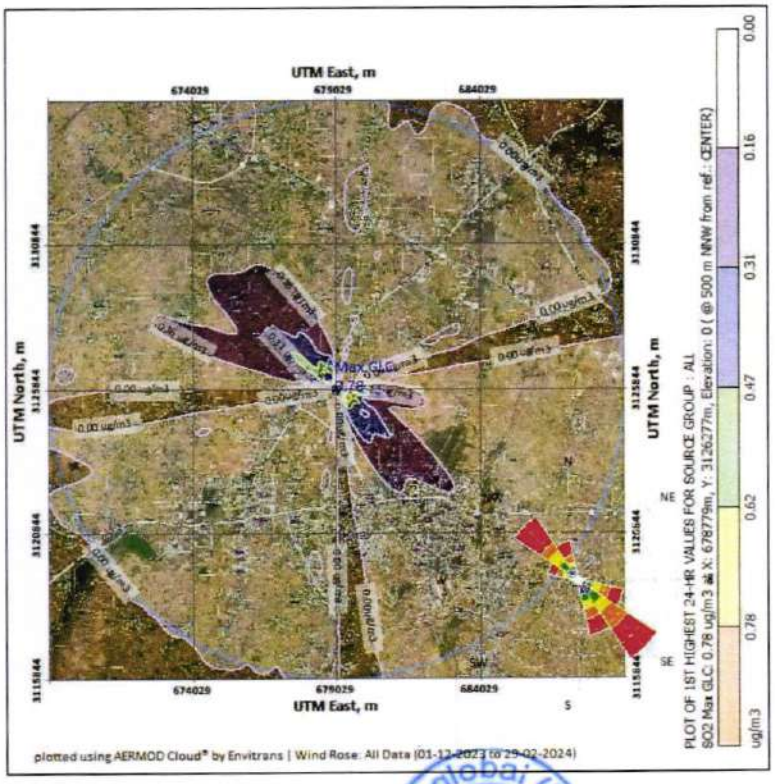


Figure 4-6 Spatial distribution of 24-hours average SO_2 concentrations (µg/m³)

Mitigation Measures: The project proponent will develop a green belt inside the premises of the project site and along the internal road, which will work as barrier for the movement of pollutants and help in pollution control.

Native plants species will be selected for peripheral and avenue plantation.

4.3.4 Noise Environment

During the construction phase: Noise will be generated from the various sources. Some major sources of noise generation at project are listed here under:

- Generation of noise during movement of vehicles carrying materials, loading & unloading activities
- Generation of noise from excavation machines, concrete mixer and other construction machines
- Generation of noise during the operation of D.G. sets
- Generation of noise during concreting, hammering etc.

All the above-mentioned sources of construction activities within the project would be intermittent and experienced occasionally. It may also be noted that most of the construction activities would be carried out only during the daytime.

ANTICIPATED IMPACTS:

Construction Phase:

- Noise due to demolition / construction activities
- Impact due to present and future transportation activities

During Operational Phase: The main sources of noise from the project are running of D.G. Sets and vehicular traffic. D.G. Sets will provide emergency electricity supply during power failure. This will be intermittent and for short durations. Hence, no major impact on noise environment is anticipated.

MITIGATING MEASURES:

Construction Phase: To minimize impacts of noise generation from construction activities, the workers are being provided with earmuffs and other protection devices. D.G. Sets with proper acoustic enclosure for controlling noise would be installed.

Operational Phase: D.G. Sets will be installed in DG room in acoustic enclosure to control the noise generated within 25 dB (A) insertion loss or for meeting the ambient noise standard whichever is on higher side as per E(P) Act, GSR 371 (E) and its amendments. The traffic noise will diminish within a short distance from the source of origin. Honking within the site will be discouraged. Proposed rows of plantation will further restrict the noise.

4.3.5 Biological Environment

Anticipated impact:

During Construction Phase: There is no loss of forestland due to the construction of the Industrial Plotted Colony Project. No tree felling is involved, as the site is devoid of

vegetation. Birds and other domesticated biodiversity observed near the project site are common and already adapted to thrive in human - colonized habitats.

The project will not have any major negative ecological impact. Green belt/greenery shall be developed along most of the periphery of the project area as well as along roads.

During Operational Phase: The green area will be developed with local species that will attract local bird and insect species. The project will add to the greenery and beauty of the region. Green belt will reduce carbon dioxide emissions caused by significant amount of energy consumption due to lighting, heating, cooling and air condition as well as fixed and mobile material handling equipment 2no. of DG set of total capacity 1100kVA for Commercial Facility which includes 1 x 750kVA +1x 350 kVA and 2no. of DG set of total capacity 1750 kVA for Common Services which includes 1 x 750kVA +1x 1000 kVA will be placed in DG room having acoustic enclosure and adequate stack height will be provided with D.G. sets as per CPCB guidelines to provide sufficient dispersion of pollutants. Therefore, there will be no effect on the ecology of the core and buffer zone.

MITIGATION MEASURES:

It is proposed to develop green area in the project site to improve the aesthetics of the area which will also help in reduction of air pollution, noise pollution and provide suitable habitat for local birds and animal species.

4.3.6 Socio Economic Environment

Economic impacts:

Relatively long-lived economic impacts of the construction phase are likely to be experienced in local area for the duration of construction phase of 1-2 years as workers make everyday purchases from local traders in nearby areas. This is likely to give a short-lived stimulus to the traders that may disappear as soon as the construction is complete.

Noticeable, flow-on economic impacts will be experienced in other sectors of economy as a result of purchase of construction materials and the payment of wages and salaries to the personnel engaged in the construction of project.

Once the construction of the Industrial Plotted Colony project is complete, there will be some long-term positive impact on the economic structure of the area. People in the area will get direct and indirect employment opportunities and other benefits from the project.

Therefore, overall positive impact is anticipated on economy of the area due to construction activity of the Project.

Mitigation measures:

To further improve the socio-economic conditions of the area, it may be proposed to employ mainly local people as workers. Much of the maintenance works may also be made with local companies and purchase of new parts from the local market.

4.3.7 SOLID WASTE

Anticipated impact:

During Construction Phase: The construction and demolition waste includes debris, concrete (often recycled and reused at the site), steel and other metals, pallets, packaging and paper products, brick, etc. All waste generated during the construction phase shall be collected and segregated for disposal as per the norms.

During Operation phase: The solid waste generated from the project shall be approx. 18,143 kg/day during operation for which calculations are given below:

Table 4-5 Calculation of Solid Waste

S. No.	Description	Occupancy	Norms (kg/capita/day)	Waste Generated (kg/day)
1.	**Domestic Solid Waste for Residential plots**			
	• Residential plots	17316	0.5	8658
2.	**Domestic Solid Waste for Industrial plots**			
	• Industrial Plots	23035	0.25	5759
3.	Staff (Residential Maintenance, Community, Commercial, & Industrial)	2070	0.25	518
4.	Visitors(Residential, Community, Commercial, & Industrial)	19060	0.15	2,859
5.	Horticultural Waste (26 acres)	@ 0.2 kg/acre/day		5.2
6.	STP Sludge	Sludge generated x 0.35 x B.O.D difference/1000		343.434
Total Solid Waste Generation = 18,143 kg/day				

Mitigation measures:

After waste segregation, Biodegradable waste will be composted by the use of mechanical composter and the compost will be used as manure. Recyclable wastes will be sold off to scrap dealers and vendors, while inert wastes will be disposed-off in landfills. Hazardous wastes will be disposed-off as per the provisions of the Hazardous Waste Rules, 2016 through a local approved vendor.

4.4 CONCLUSION

As discussed, the project has no major adverse impact on surrounding environment; it has thus become quite evident that this project is not likely to cause any significant impact on the ecology of the area, as adequate preventive measures will be adopted to contain the various pollutants within permissible limits. Positive impact will be on socio economic environment.

- Green belt development will be taken up as an effective pollution mitigating technique.
- Adequate stack height for DG sets for better dispersion of air pollutants will be provided.

- Soil conservation measures associated with improved construction techniques would minimize the impacts. Topsoil will be stacked separately and will be used for green belt.
- Proper upkeep and maintenance of vehicles will reduce the impact on air environment. Domestic waste as well as construction debris management will be done properly.
- Adequate arrangements for proper drainage and disposal of wastewater
- Rainwater harvesting
- The wastewater will be treated in STP of 3060 KLD capacity.

Thus, with the effective implementation of the Environment Management Plan (EMP), the project will not have any significant negative impact on the environment.

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CHAPTER-5 : ANALYSIS OF ALTERNATIVE (TECHNOLOGY & SITE)

This Chapter is not applicable as it has not been prescribed in the Standard ToR issued by SEAC, Haryana.

CHAPTER-6 : ENVIRONMENTAL MONITORING PROGRAM

6.0 INTRODUCTION

Environmental Monitoring is an essential tool for sustainable development and ensuring effective most implementation and monitoring of Environmental management plan and mitigation measures. The monitoring and evaluation of the management measures envisaged are critical activities in implementation of the Project. Monitoring involves periodic checking to ascertain whether activities are going according to the plans. It provides the necessary feedback for project management to keep the program on schedule. The purpose of the environmental monitoring plan is to ensure that the envisaged purpose of the project is achieved and results in desired benefits.

To ensure the effective implementation of the proposed mitigation measures, the broad objectives of monitoring plan are:

- To evaluate the performance of mitigation measures proposed in the EMP.
- To evaluate the adequacy of Environmental Impact Assessment
- To suggest improvements in management plan, if required
- To enhance environmental quality
- To implement and manage the mitigative measures defined in EMP.
- To undertake compliance monitoring of the proposed project operation and evaluation of mitigative measures

A detailed monitoring of emissions and effluent sources for different environmental parameters will be carried out as per the present norms and any further notification/direction from Haryana State Pollution Control Board (HSPCB), Central Pollution Control Board (CPCB) and MoEF&CC. Monitoring methodologies will follow standard methods prescribed by CPCB, Bureau of Indian Standards (BIS), USEPA, AWWA etc.

6.1 PARAMETERS TO BE MONITORED

- Ambient Air Quality
- Stack Emission
- Work zone Air quality
- Surface water and Ground Water Quality
- Noise Level

6.1.1 Ambient Air Quality

It is necessary the monitor the air quality at the boundary of the project site specifically with respect to particulate matters. Ambient air quality monitoring stations in and around the premises will be done as per direction by Haryana State Pollution Control Board (HSPCB). The parameters monitored include the parameters as per National Ambient Air Quality Standard, 2009.

Table 6-1 Ambient Air Quality – Frequency and Parameters

Description	Number of Monitoring Stations	Frequency
Ambient Air Quality	2 (upwind and downwind direction inside the plant boundary	Weekly
Parameters – PM_{10}, $PM_{2.5}$, SO_2, NO_2		

Table 6-2 Instruments Required for Environmental Monitoring

	Name of Instruments	Number	Purpose
1	PM_{10}& $PM_{2.5}$ Sampler	3	Ambient Air Quality Monitoring
2	Spectrophotometer	1	Analysis of air and water
3	pH meter	1	pH measurements
4	Conductivity meter	1	Conductivity measurement
5	DO Meter	1	DO measurement
6	BOD Incubator	1	BOD measurement
7	COD Digestion Kit	1	COD measurement
8	Refrigerator	1	Storing samples
9	Electronic Balance	1	Weighing
10	Oven	1	Drying
11	Desiccator	1	Desiccation

6.1.2 Effluent Quality

The total waste generated during the operation phase of the project will be treated in the Sewage treatment Plant of 3060 KLD within the project premises and all the treated water will be reused for the flushing & landscaping activity.

Table 6-3 Water Quality – Frequency and Parameters

Component	Location	Parameter	Monitoring & Analysis Method	Monitoring Frequency
STP Treated water	STP	pH, TDS, DO, COD, BOD & O&G	Standard Methods of APHA	Once during pre-monsoon and once during post monsoon

6.1.3 Noise Monitoring

Noise levels in the work zone environment such as project site should be monitored and shall be compared with as per the requirement of Occupational Safety and Health Administration (OSHA) Standards.

Monitoring of Ambient noise levels will be monitored once every quarter during day time (6 AM to 10 PM) and night time (10 PM to 6 AM) at Project site boundary.

6.2 PLANTATION

Total green area measures **37,241.664** m^2. Plantation will be done at project boundary as well as at peripheral areas & organized green would be developed on land available between blocks.

The indicative list of trees and plants proposed to be planted are given in **Table 6.4.**

Table 6-4 Proposed Plantation List

S. No.	Botanical Name	Common Name
1.	Acacia leucophloea	Raunj
2.	Albizzia lebbek	Siris
3.	Azadirachta indica	Neem
4.	Anogeissus pendula	Dhauk
5.	Bombax ceiba	Semal
6.	Boswelli aserrata	Salai
7.	Butea monosperma	Dhak
8.	Cassia fistula	Amaltas
9.	Cordia dichotoma	Lasura
10.	Dalbergia sissoo	Shisham
11.	Holoptelia integrifolia	Papri
12.	Kigelia pinnata	Kigelia
13.	Melia azedarach	Bakain
14.	Pongamia pinnata	Papri, Karanj
15.	Prosopis cineraria	Jand, Jandi
16.	Salvadora oleoides	Jal
17.	Terminalia arjuna	Arjun
18.	Bauhinia variegata	Kachnar
19.	Ficus religiosa	Peepal
20.	Ficus bengalensis	Bad

No. of trees required = 1 tree/80 sq.m. of plot area =5,49,258.716/80 = 6866 Nos
No. of trees proposed to be planted = 6,870 trees.
As per OM dated 24.07.2024 we will plant one additional tree "EK Ped Maa Ke Naam."

There are few trees present at the project site which will be transplanted in the greenbelt.

6.3 OCCUPATIONAL HEALTH & SAFETY MONITORING

Occupational health and safety monitoring programs shall verify the effectiveness of prevention and control strategies. The selected indicators shall be representative of the most significant occupational, health, and safety hazards, and the implementation of prevention and control strategies. The performance and achievements of the OHSMS responsible for all management of all environments, Health & Safety aspects shall be re-assessed on annual basis. The occupational health and safety-monitoring program shall include: -

- Safety inspection, testing and calibration: Project Proponent shall carryout inspection and testing of all safety features and hazard control measures for plant operation. This shall include regular inspection and testing of all safety features focusing on engineering and personal protective features, work procedures, places of work, installations, equipment, and tools used. The inspection shall verify that issued personal protective equipment (PPE) continues to provide adequate protection and is being worn as required.
- Surveillance of the working environment shall be carried out.
- Surveillance of workers health: When extraordinary protective measures are required, workers shall be provided appropriate and relevant health surveillance. M/s Signatureglobal India Limited, will provide appropriate and relevant health surveillance to workers with special emphasis to the dust prior to first exposure and at regular intervals thereafter.

6.4 TRAINING

Training activities for employees and visitors shall be adequately monitored and documented (curriculum, duration, and participants). Emergency exercises, including fire drills, shall be documented adequately. Service providers and contractors shall be contractually required to submit to the authorized vendor (for training) adequate training documentation before start of their assignment.

6.5 PERIODIC PREVENTIVE MAINTENANCE

A detailed maintenance schedule shall be drawn for all pollution control systems. The maintenance shall be done strictly as per schedule and guidelines furnished by plant manufacturer. All pollution control, monitoring and safety equipment shall be periodically checked and calibrated.

6.6 SOCIO-ECONOMIC DEVELOPMENT

The setting up of the project will improve the socio-economic conditions in the surrounding area. The proposed project will further improve the infrastructure; economic conditions

thus further improve the socio-economic development. It is suggested that M/s Signatureglobal India Limited, should have structured interactions with the community to disseminate the measures taken by them and to elicit suggestions for overall improvement for the development of the area.

6.7 BUDGET AND PROCUREMENT SCHEDULE

On regular basis, Environment Management Cell (EMC) will inspect the necessity and availability. The EMC will make appropriate budget for the purpose. Regular record review for any change in financial requirement of environment management will be done and appropriate budgetary provisions will be made. Along with other budgets, Budget for environmental management will be prepared and revised regularly as per requirement. The budget will include provisions for:

- Environmental Monitoring Program
- Greenbelt development
- Social and Environmental Welfare and Awareness programs / training (CER)
- Annual Environmental Audit

Table 6-5 Cost of Environmental Monitoring Program

S. No.	Particulars	Parameters	Frequency	Approx. Recurring cost / Annum (INR Lakh)
1.	Ambient Air Monitoring	$PM_{2.5}$, PM_{10}, SO_2 & NO_2 & CO	Every Six Month	2.0
2.	Stack Emission Monitoring	$PM_{2.5}$, PM_{10}, SO_2, NO_2, HC & CO	Yearly	2.0
3.	Water Quality Monitoring	Drinking water specification	Every Six Month	2.0
4.	Noise Level Monitoring	24 Hrs. Noise Level	Every Six Month	1.0
TOTAL			**7.0**	

S. No.	Particulars	Parameters	Frequency	Approx. Recurring cost / Annum (INR Lakh)
1.	Ambient Air Monitoring	$PM_{2.5}$, PM_{10}, SO_2 & NO_2 & CO	Half Yearly (24 hr average samples)	2.0

2.	Stack Emission Monitoring	$PM_{2.5}$, PM_{10}, SO_2, NO_2, HC, CO	Every Six Month	2.0
3.	Treated Effluent Monitoring	pH, BOD, COD, Oil, Grease & Total Suspended solids	Daily	2.0
4.	Noise Level Monitoring	24 Hrs. Noise Level	Half Yearly (Hourly day and nighttime Leq levels)	1.0
5.	Ground Water Monitoring	Drinking water specification as per IS10500	Half Yearly	2.0
TOTAL			**9.0**	

6.8 SUMMARY

In order to maintain the environmental quality within the stipulated standards, regular monitoring of various environmental components is necessary which will be complied as per conditions. An Environmental Management Cell will be constituted that will be committed to operate the proposed project with the objectives mentioned in approved Environment Policy. Regular Monitoring of all the environmental parameters *viz.*, air, water, noise and soil as per the formulated program based on CPCB and MoEF&CC guidelines will be carried out every year. The location of the monitoring stations was selected on the basis of prevailing micro meteorological conditions of the area like; wind direction and wind speed, relative humidity, temperature. A budget for monitoring of Air, water, Noise and Soil will be Rs. 7.0 Lakhs (during construction Phase) and Rs. 9.0 Lakhs (during Operation Phase) to be incurred by the project proponent for undertaking pollution prevention measures during the construction and operation activities.

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CHAPTER-7 : ADDITIONAL STUDIES

7.1 GENERAL

This chapter analyses the studies that has been carried out for the purpose of better understanding of disaster during operation of the project. It also highlights the in-advance preparation to face disaster with respect to both onsite and off-site emergencies. The chapter also covers socio economic studies done for the project.

7.2 RISK ASSESSMENT AND DISASTER MANAGEMENT PLAN

Risk assessment forms an integral part of EIA study. Risk assessment study deals with identifying and evaluating the magnitude of impending risks to which the neighboring population is exposed due to occurrence of accidents involved in the project construction and implementation. This assist in illustrating the guidelines for preparation of disaster management plan which will be executed, to handle the situation if any emergency occurs.

Emergency Plan

Since the project may face fire hazards or other emergency situations; an emergency plan is provided to caution the persons during any accidents. The fundamental approach, governing fire safety attempts to ensure that fires do not at all start in the first place and if they occur, to restrain their spread by quick detection and extinguishments.

Fire Detection

Despite many precautions taken, fires may breakout. Hence the industry will establish measures to detect a fire and to extinguish it. Automatic fire detection has many advantages such as speed and reliability and is recommended.

Depending on the nature of the occupancy and the hazard, a variety of detection systems are available. They are activated by one of the effects of fire such as temperature rise, smoke, flame or heat and can be coupled to an alarm system which would provide visual/ audible alarms at designed manned locations. They can also be designed to automatically actuate fire-extinguishing systems. The selection / installation of the detection system should confirm to the applicable national standards.

Extinguishing System

Equipment for the fighting should be chosen with care and suited to the task. Fires are classified depending on the materials involved and appropriate extinguishing agents are also recommended. **Table-7.1** gives the classification/ recommendation as per Indian Standard IS-15683. The extinguishing agents mentioned are applied to the fire using portable or fixed appliances. To fight fires at their incipient stage, portable extinguishers prove very useful. These must be provided in adequate numbers at appropriate locations and persons should be thoroughly trained in their use.

Table 7-1 Fires - Classification & Extinguishing Media

Class of Fire	Description	Extinguishing medium	Indian Standard
A	Fires involving ordinary combustible materials, like woods, paper textiles, etc. where the cooling effect of water is essential for the extinction of fire.	Water	934 940 6234
B	Fire in flammable liquids like oils, solvents, petroleum products, varnishes, pains etc. where a blanketing effects is essential	Foam Carbon dioxide Dry chemical	933 2878 2171 4308
C	Fires involving gaseous substances under pressure where it is necessary to dilute the burning gas at a very fast ate with an inert gas or powder.	Carbon dioxide Dry Chemical powder The best way to extinguish such fires is by stopping the flow of fuel gas to the fire. Container is kept cool with water spray	2878 2171, 4308
D	Fires involving metals like magnesium, aluminium, zinc, potassium etc. where the burning metal is reactive to water and which requires special extinguishing media or technique.	Special dry powders	2171 4861

The task of accident and emergency control can be simplified and made effective if pre planned systems and procedures are available. Without these, important matters may be overlooked at the time of emergency.

Every management must survey the total operation to identify potential for fire losses and develop an action plan to put the business back to normal with minimum loss of time. A fire protection Manual should be prepared, preferably in 3-parts. The first part should outline the fire risks in terms of plant locations, equipment and facilities and indicate the ways in which risks have been minimized. The second part would set out operating procedures, standards of fire protection established, and maintenances of these standards action to be taken in the event of fire by every level of management responsibility for inspection and repair. It should also include instructions for staff responsible for building services. The

third part should outline the training required for existing and new staff, the inspection schedules and checklists, sources of additional information and help.

The Management Cell of the project shall keep ready a plan to alert and take care of persons in case there is any fire. There shall be designated an Emergency Team that shall consist of staff of maintenance department, security supervisor representative. During non-emergencies, this team shall engage in activities as:

- Earmarking Area for Assembling during Emergencies
- Awareness Programme for the on fire, first aid and evacuation
- Identification of Hospitals
- Identification and Displaying Emergency Numbers and Contacts
- Displaying Emergency Symbols
- Updating First Aid Emergency Kit
- Updating Fire Control Systems
- Preparation and Updating of Standard Operating procedures (SOP)

In case member on duty spots the emergency like comes to know about any fire, he will also try his best to find out about the exact location and nature of emergency. In accordance with the SOP, the following activities will immediately begin.

Persons will be informed; necessary Alarms shall be activated to direct the persons to the emergency assembly area if needed.

The external network of District Fire Station, Police and Hospital shall be intimated. Once the emergency is under control, the team will initiate step-by-step restoration of normal operation.

Management Plan

Since the project may face fire hazards or other emergency situations an emergency plan is provided to caution the persons during any accidents. The fundamental approach, governing fire safety attempts to ensure that fires do not at all start in the first place and should they occur, to restrain their spread by quick detection and extinguishments.

7.3 NATURAL RESOURCES CONSERVATION

The project will lead to utilization of various natural resources. As an environmentally responsible corporate, the developers endeavor to conserve these resources by judicious management and recycling and strive to build up these resources where possible.

Limited withdrawal of groundwater: The water will be supplied during operational phase through pipeline.

Reduced use of water: To further minimize the use of available fresh water, various low flow fixtures may be provided in Industrial Plotted Colony Project such as Low flow flushing systems, sensor based fixtures, waterless urinals, tap aerators. Awareness will also be spread amongst the persons on the following lines:

- Timely detection and repair of all leakages
- Avoiding use of running water while handwashing
- Turning off the main valve of water while going outdoor
- Avoiding use of hose for washing floors
- Use of broom may be preferred.
- Watering of lawn or garden during the coolest part of the day (early morning or late evening, hours) when temperature and wind speed are lowest. This reduces losses due to evaporation.
- Planting of native and/or drought tolerant grasses, ground covers, shrubs and trees. Once fully grown, they need not to be watered frequently.
- Avoiding over watering of lawns
- Good rains eliminate the need for watering for more than a week.
- Setting sprinklers to water the lawn or garden only, not the street or sidewalk.
- Avoiding installation or use of ornamental water features unless they recycle the water and avoiding running them during drought or hot weather.
- Installation of high-pressure, low-volume nozzles on spray washers and
- Installation of float-controlled valve on the make-up line, closing filling line during operation, provision of surge tanks for each system avoid overflow.

Treatment and Recycling: The wastewater generated from the project will be treated in proposed Sewage Treatment Plant of capacity 3060 KLD. This will enable the treated wastewater to be used for flushing and landscaping thereby reducing the requirement of freshwater for these purposes.

Rainwater harvesting: It is proposed to harvest the rainwater runoff that will recharge the groundwater resource by providing 65 no. of pits and eventually natural water bodies. Apart from the open spaces, it is proposed to harvest the roof top rainwater and paved area rainwater. The storm water will be treated through an oil and grease trap and allowed to flow through layers of sand and gravel for filtration prior to reaching the water table, to avoid any possibility of groundwater contamination.

Construction materials: It is proposed for prior estimation of required quantities of these materials and procurement only as per requirement. This will also result in cost-efficiency. Excavated soil from the project will be used within the site to the extent feasible. Excess soil will be made available to the construction sites, as per need.

Energy: To conserve the energy resources, good practices will be followed during the construction phase such as turning off lights when not in use, ensuring fuel efficiency of motors and vehicles through proper maintenance and minimal work at night. The principles of energy conservation will also be embedded in the buildings through use of energy efficient fixtures, maximum availability of natural light and use of solar energy for street lighting.

7.4 RESETTLEMENT AND REHABILITATION

The project will not result in displacement of any local population and hence, does not require a resettlement and rehabilitation study.

7.5 TRAFFIC STUDY

Anthropogenic emissions not only contribute to the Greenhouse effect but also participate in the reaction resulting in photochemical oxidants. The effect of photochemical oxidants is well known for forming smog. Among the anthropogenic sources of pollutants forming the greenhouse gases, burning of fossil fuels constitute a major source. Highway mobile sources that contribute significantly to poor quality of air have not been regulated for the past two decades. In India two-wheelers are a very popular mode of personal transport. Most of them are powered by two-stroke engines because of initial and maintenance costs. However, they have high emission levels causing air pollution.

The objective of traffic study and emission quantification is to assess the magnitude of the emissions resulting from two wheelers, three wheelers and four wheelers that are extensively used as a means of common transport.

A detailed traffic survey was conducted in the area at major traffic intersections in order to arrive at the traffic density in the study area and also to evaluate the impacts of the increased traffic due to the proposed activity.

Vehicular emissions are the major source of air quality impacts in the study area. The principal cause of air pollution during the construction phase is the diesel-powered vehicles used in the haulage of aggregates, earth and other construction material. Air quality could be affected by dust and particulate matter arising due to site clearing, vehicular emissions, etc. Gaseous emissions like SO_2, NO_2, CO and HC might be released from the vehicular movement, which has a direct impact on the environment.

Increase in traffic in the study area has a direct impact on the resources as a heavy release of automobile exhaust is envisaged which has a direct impact on the air quality and the ambient noise levels in the study area. The methodology adopted for carrying out the traffic study was to select the major roads around the project site and count the various categories of vehicles moving on the roads.

Table 7-2: Traffic Density at the NH- 48

	2 wheeler	PCU (0.5)	3 wheeler	PCU (1.2)	4 wheeler	PCU (1)	B/L	PCU (3.7)	Total PCU
06:00-07:00	178	89	98	74	126	126	104	312	601
07:00-08:00	198	99	101	76	169	169	108	324	668
08:00-09:00	202	101	123	92	262	262	97	291	746
09:00-10:00	226	113	132	99	301	301	109	327	840
10:00-11:00	245	123	106	80	299	299	112	336	837
11:00-12:00	235	118	124	93	286	286	126	378	875
12:00-13:00	248	124	106	80	249	249	96	288	741

13:00-14:00	256	128	115	86	266	266	107	321	801
14:00-15:00	275	138	119	89	245	245	99	297	769
15:00-16:00	249	125	121	91	265	265	89	267	747
16:00-17:00	246	123	107	80	279	279	96	288	770
17:00-18:00	259	130	108	81	315	315	91	273	799
18:00-19:00	265	133	114	86	299	299	87	261	778
19:00-20:00	245	123	109	82	265	265	79	237	706
20:00-21:00	243	122	95	71	245	245	121	363	801
21:00-22:00	221	111	86	65	212	212	106	318	705
22:00-23:00	156	78	75	56	196	196	86	258	588
23:00-00:00	145	73	74	56	186	186	89	267	581
00:00-01:00	123	62	36	27	175	175	92	276	540
01:00-02:00	142	71	30	23	156	156	83	249	499
02:00-03:00	126	63	28	21	145	145	86	258	487
03:00-04:00	112	56	29	22	115	115	84	252	445
04:00-05:00	146	73	36	27	125	125	110	330	555
05:00-06:00	157	79	51	38	135	135	118	354	606

PCUs as per IRC-106:1990

Table 7-3: Existing Traffic Scenario & LOS

Road	V	C	Existing V/C Ratio	LOS
NH- 48	687	2400	0.286	B

V= Volume in PCUs/hr & C= Capacity in PCUs/ hr

The existing Level of Service is "B" i.e. Very Good

Table 7-4: Capacity as per IRC: 106-1990 page no. 11 table-2 for arterial road/ Highways

V/C	LOS	Performance	V/C
0.0 - 0.2	A	Excellent	0.0 - 0.2
0.2 - 0.4	B	Very Good	0.2 - 0.4
0.4 - 0.6	C	Good / Average / Fair	0.4 - 0.6
0.6 - 0.8	D	Poor	0.6 - 0.8
0.8 - 1.0	E	Very Poor	0.8 - 1.0

- The total proposed parking for the project is **1,168 ECS,** It is estimated that 90% of the vehicles will leave or be operating at the site from (Ready to ply or incoming) 7:00 AM to 8:00 PM i.e. **1,168 x 0.90 = 1,051** and the remaining 10% parking space will remain vacant or parked with Light Motor Vehicles i.e. **1,168 x 0.10 = 117**.

- Since the maximum number of trips will happen between 7:00am to 8:00 PM (i.e.) 12 hours

- Therefore, on average the total number of trips per hour is 1,051/12 = **88 vehicles/ hour.**

Table 7-5: Modified Traffic Scenario

Road	V	C	Modified V/C Ratio	LOS
NH- 48	687 + 88= 775	2400	0.32	B

Modified Traffic Scenario & LOS (after completion of the project)

The modified LOS will be "B", i.e. **"VERY GOOD"**; therefore there will be no change in LOS after completion of the project. The total parking proposed for the project = **1,168 ECS**.

The project proponents will have a failsafe traffic circulation plan for the "Industrial Plotted colony " project so that smooth passage of vehicles can take place.

The support staff will be trained to handle the morning and evening rush. The traffic generated from the project is assumed to be distributed between 6:00 AM to 10:00 AM & 19:00 PM- 00:00 AM and will distributed along all two directions of the project along the road.

7.6 Socio-Economic Environment

Summary of need-based assessment carried out in surrounding villages are given below.

1. Safe Drinking Water

Observations: People use hand pumps and dug well for potable uses (including drinking).

2. Basic Medical Facilities

Observations: Primary health care facilities are available in large villages and hospital is available in Gurugram.

3. Education Facilities

Observations: Education facilities (infrastructure, teaching aids and teachers) are good.

4. Improved Agricultural Practices

Observations: Farming is the main occupation of villagers. The villagers have very good knowledge about the modern agricultural practices for improving the yield.

5. Veterinary Hospital

Veterinary hospital is not available in most of the villages. It is available in Gurugram.

6. Roads

Observations: The quality of existing village road is good.

7. Sewerage System

Observations: Sewerage system is not available in any of the villages of study area. Open drains are almost clogged and overflowing with sewage.

8. Garbage Disposal

Observations: No garbage disposal facility exists in any of the villages of study area. Villagers throw their garbage in the open.

9. Pollution from Industries

Observations: Fugitive emissions are visible from nearby construction activities. Problem of re-suspended road dust and dust from unpaved road is rampant.

10. Employment among Local

Observations: Many local people of nearby villages work in the existing industries. Some conflict among the contractors who supply migratory laborers as well as who supply transport services. No such conflict has been observed in other villages.

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CHAPTER-8 : PROJECT BENEFIT

8.0 EMPLOYMENT GENERATION

The proposed project will generate employment opportunities for the local population during construction phase. The total manpower requirement during construction is about 200 people. This will last for approximately 12 months. Skilled, unskilled and semi-skilled labour will be preferably hired from nearby places.

Estimated manpower requirement during operation shall be 300 workers which will get direct job opportunities. Indirect employment through contractors, like drivers, attendants, mechanics, daily wage labour, housekeeping, horticulture staff, etc. would also be generated.

8.1 IMPROVEMENTS IN THE PHYSICAL INFRASTRUCTURE

The proposed project will enhance the following physical infrastructure facilities in the adjoining areas:

a. **Road Transport:** The existing roads will be maintained to improve the road communication.
b. **Infrastructure:** Creation of community assets (infrastructure) like drinking water facilities, dispensary, shops, etc. as a part of corporate environment responsibility.
c. **Green Belt Development: 1,05,302.64** m^2 will be developed as green within site. Plantation will be done at project boundary as well as along internal roads.

8.2 IMPROVEMENTS IN THE SOCIAL INFRASTRUCTURE

The Construction in the project area will create rural employment. The project activity will have a positive impact on the social, economic condition of the area by way of providing employment to the local inhabitants; wages paid to them will increase the per capita income, housing, education, medical and transportation facilities, economic status, health and agriculture.

8.3 ENVIRONMENT MANAGEMENT PLAN BUDGET

The total cost (Land Cost + Development Cost) of the proposed project will be INR 1593.7 Crores. The capital cost for environmental management of the proposed project is estimated to be INR 796 lakhs (Construction and operation). INR 126.25 lakhs (operation and construction) per year will be required as annual recurring expenses to meet the recurring expenditure for implementing the measures.

Table 8-1 ENVIRONMENT MANAGEMENT PLAN BUDGET

Component	Capital Cost (INR Lakh)	Recurring Cost (INR Lakh/Yr)
Labor Sanitation & Wastewater Management	35	8.75

Dust Mitigation Measures Including site barricading, water sprinkling & anti-smog gun)	25	6
Storm Water Management (temporary drains & sedimentation basin)	10	2.5
Solid Waste Management	5	1
TOTAL	**75**	**18.25**

During Operation Phase		
COMPONENT	**CAPITAL COST (INR LAKH)**	**RECURRING COST (INR LAKH/YR)**
Sewage Treatment Plant	190	47.5
Rain Water Harvesting System	115	28.75
Solid Waste Management	80	20
Environmental Monitoring	6	9
Green Area/ Landscape Area	50	12.5
Others (Energy saving System, miscellaneous)	60	15
Sub-Total	**576**	**108**
Socio-Economic		
Government Sr. Sec School at Village Rewari/ Shidrawali/ Dhani Bhora Khurd / or in any nearby village • Complete makeover • Construction of toilets • Installation of Solar Panels • Painting of School Building • Replacement of doors and windows • Energy efficient lighting • Smart Classroom equipment	145	--
Total	**721**	**108**

TOTAL EMP BUDGET		
COMPONENT	**CAPITAL COST (INR LAKH)**	**RECURRING COST (INR LAKH/YR)**
During Construction Phase	75	18.25
During Operation Phase	721	**108**
TOTAL	**796**	**126.25**

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CHAPTER-9 : ENVIRONMENTAL COST BENEFIT ANALYSIS

This Chapter has not been prescribed in Standard ToR issued by SEAC, Haryana

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CHAPTER-10 : ENVIRONMENTAL MANAGEMENT PLAN

10.0 INTRODUCTION

Environmental Management Plan details the environmental quality control measures which are proposed for this project by complying with the stipulated standard limits specified by State Pollution Control Board and CPCB. The environmental management plan includes all preventive as well as mitigation measures to minimize impact on environment.

Environmental Management Plan will cover the following:

- Land use pattern and environment.
- Air Environment
- Noise Environment
- Water Management
- Solid Waste Management
- Biological Environment
- Implementation of EMP and Monitoring Program

10.1 ENVIRONMENT POLICY & ENVIRONMENT MANAGEMENT CELL

The Company has a well-defined Environment policy. Structure of Environment Management Cell (EMC) is as shown below in Fig. 10.1:

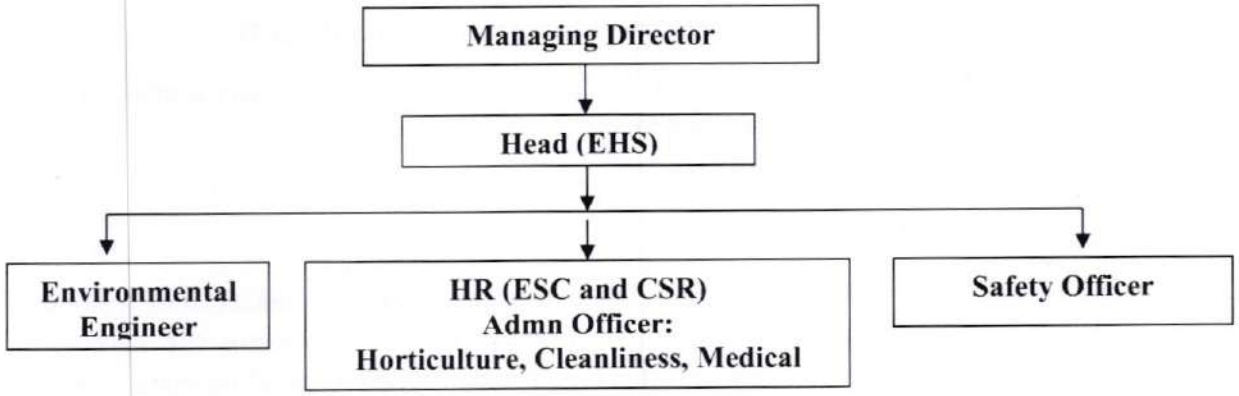


Figure 10-1 Structure of EMC

The Environment Policy of the company is as stated below:

- Follow the National laws and regulations related to Environment Protection and Prevention & Control of Pollution
- Design, construct and operate the project by adopting process that are sustainable and environmentally acceptable in the country.
- Take steps to prevent, minimize and control releases to air, water and land of substances which could adversely affect human health and the environment.

- Reduce waste at source by careful use of materials, energy and other resources and maximize recycling.
- Create the Environment Management Department in its plant, employ experienced staff and empower them to take decisions related to procurement, installation and efficient operation of all pollution control systems.
- Create a suitable system of reporting non-compliance and ensuring compliance.
- Provide and maintain healthy and safe working conditions for all employees.
- Ensure the protection of the health and safety of people affected by its operation.
- Adopt measures to ensure that all its contractors and business associates also comply with National laws and regulations related to Environment Protection and Prevention & Control of Pollution
- Focus on continual improvement of environmental performance and ensure involvement of employees at all levels by providing training & awareness.
- Carry out regular environmental monitoring, assessments and report results for wide dissemination among all stakeholders.

10.1.1 ROLES & RESPONSIBILITIES OF EMC

EMC will be responsible for the following:

INTERACTION WITH THE STATE POLLUTION CONTROL BOARD

EMC shall be in regular touch with SPCB and shall send them environmental monitoring reports regularly in the prescribed format.

PROVIDE TRAINING

EMC would be responsible for the implementation of the EMP, needs to be trained on the effective implementation of the environmental issues. To ensure the success of the implementation set up proposed, there is a high requirement of training and skill up-gradation. For the proposed project, additional training facilities will be developed for environmental control. For proper implementation of the EMP, the officials responsible for EMP implementation will be trained accordingly.

To achieve the overall objective of pollution control it is essential not only to provide latest pollution control and monitoring systems but also to provide trained manpower resources to operate and maintain the same. Therefore, apart from the EMC, specific training will be provided to personnel handling the operation and maintenance of different pollution control equipment.

The training will be given to employees to cover the following:

- Awareness of pollution control and environmental protection
- Operation and maintenance of pollution control equipment
- Organize field monitoring, maintenance and calibration of pollution monitoring instruments
- Laboratory testing of pollutants
- Repair of pollution monitoring instruments
- Occupational health/safety
- Disaster management
- Environmental management
- Afforestation / plantation
- Timely renewal of Consents & Authorization.
- Submitting environmental monitoring report to SPCB
- Submit annual Environmental Statement to SPCB
- Prepare and submit six monthly report on the compliance with the conditions of the environmental clearance
- Keeping the management updated on regular basis about the findings / results of monitoring activities and proposes measures to improve environmental performance
- Conducting regular safety drills and training programs to educate employees on safety practices. A qualified and experienced safety officer will be responsible for the issues related to occupational safety and health

10.2 EMP DURING CONSTRUCTION PHASE

10.2.1 LAND ENVIRONMENT

The site is flat hence no levelling is required. Earth excavated during civil foundations will be reused for raising the plinth and backfilling the columns. Dust generated due to earthwork including excavation and transportation activities, especially during dry weather conditions will be controlled by water sprinkling, barricading, etc.

10.2.2 AIR ENVIRONMENT

Dust will be generated at work site during the construction activity like excavation and vehicular movement. Providing suitable surface treatment to ease the traffic flow and regular sprinkling of water will reduce the dust generation. All internal roads will be asphalted and cleaned daily, so there will be less generation of re-suspended road dust.

10.2.3 WATER ENVIRONMENT

STP treated water will be used for construction. Culverts will be provided to maintain the drainage pattern. No water accumulation will be ensured at site. Mobile toilets will be provided for labour.

10.2.4 NOISE ENVIRONMENT

The noise generated during the construction phase will be due to the movement of vehicles and construction equipment. Construction equipment and transport vehicles will be properly maintained so that noise generation is minimized. Regular maintenance schedule will be adopted for all construction equipment and vehicles.

10.2.5 SOLID WASTE MANAGEMENT

Careful design, planning and good site management would minimize waste generation. Construction waste will be segregated at site itself to increase the feasibility of recycling concrete and masonry as filling material and steel pieces as saleable scrap.

Disposal of waste will be done in accordance with C&D Rules, 2016 for which a local approved vendor will be appointed.

Muck shall be generated from drains and sedimentation pits. The muck shall be collected daily and stored at earmarked place. It shall be finally disposed within the project premises for plinth raising purpose. Litter disposal and collection points shall be established around all construction work sites.

10.2.6 SANITATION AND SAFETY MEASURES OF CONSTRUCTION WORKERS

Construction workers will be made aware of possible hazards and safety measures that need to be taken during construction activities through organized training. Personal Protective Equipment (PPEs) such as dust masks, goggles, earplugs/ earmuffs, safety gloves, safety belts, safety shoe with toe protection, gumboots will be made available at construction site. Construction workers and vehicle drivers will be provided with drinking water, canteen and mobile toilet / washroom facility. Rest room facility for truck drivers will also be provided.

10.3 EMP DURING OPERATION PHASE

10.3.1 AIR POLLUTION MANAGEMENT PLAN

The dust emissions will be controlled by regular water sprinkling, use of low sulphur diesel, green belt development and adequate stack height (30 m) for DG sets.

10.3.2 NOISE POLLUTION MANAGEMENT PLAN

10.3.2.1 Development and Construction Phase

During the construction phase, some noise will be generated through the operation of construction machines, excavators, DG sets, etc. Following measures would be taken; into consideration to mitigate the noise at construction site:

- Use of well-maintained equipment fitted with silencers and providing noise shields near the heavy construction operations

- Acoustic enclosures would be provide to DG sets at the construction site,
- Earmuff and other protection devices shall be provided to laborers working in high noise generating machines.
- High noise activities shall be carried out during daytime.

10.3.2.2 Post Construction Phase

The main sources of noise during this phase are the intermittent use of DG Sets and traffic. The principles of noise emission control and screening are proposed for the two different scenarios of noise generation.

10.3.2.3 Noise emission control

All the D.G. Sets will be provided with acoustic enclosures ensuring 25 dB (A) insertion loss or for meeting the ambient noise standards whichever is higher as per CPCB norms. It will be ensured that the manufacturer provides acoustic enclosures as an integral part with Diesel Generator Sets.

Barriers:

Trees having thick and fleshy leaves with flexible petioles having capacity to withstand vibration are suitable. Heavier branches and trunk of the trees also deflect or refract the sound waves. The following species are proposed to be used in a greenbelt especially surrounding industrial Plotted Colony and along the periphery of the project.

- *Anthocepalus cadamba*
- *Kigelia africana*
- *Couroupita guianensis*
- *Polyalthia longifolia*

10.4 WATER POLLUTION MANAGEMENT PLAN

The entire wastewater from the project will be treated in-house STP of 2860 KLD and the treated water will be used in horticulture and flushing.

10.5 MEASURES FOR IMPROVEMENT OF ECOLOGY

There is no ecologically sensitive area within 10 km radius of the proposed plant. No wildlife exists in the vicinity of the project. Plantation programme will be undertaken at several areas. We have proposed 6870 trees as per MoEFCC norms.

10.5.1 GREENBELT DEVELOPMENT

Site Preparation: Careful preparation will enhance vegetation growth overcoming the establishment problems which are often encountered on construction sites. The handling and treatment of soils which are to be used within the potential root zone of the vegetation will take account of the following factors:

- Soil as a medium for plant growth
- Continuity between soil layer

- Proper soil handling avoiding destruction of natural aerobic soil organisms
- Minimum soil compaction without excessive densities

Plant propagation: Planting nursery raised plants and planting cuttings are normally practiced for trees and shrubs. Direct sowing (seeding) is, however, becoming more widely used for herbs and shrubs. Seeds are cheap and versatile but during the establishment phase they are very vulnerable to desiccation and prediction. In each of above-mentioned cases the establishment period is critical because the individual plant is at risk from many sources i.e. drought, predation and damage.

Procurement of Seedlings / Saplings: Seeds will be procured from a certified agency. The seedlings of species selected will be obtained from the nursery of Forest Department or from commercial nurseries. Seeding spots will vary in size from 100-150 mm diameter containing a few seeds only, to 1-2 m^2 patches containing many species. Existing groundcover will be removed before seeding, in order to reduce competition for moisture and nutrients.

Plantation: This will include digging pits with proper spacing, filling pits with prepared soil, plantation of seedlings and watering. The size of the pit will be 1m x 1m x 1 m for grown-up trees and 0.5 m x 0.5 m x 0.5 m for smaller trees and shrubs. The spacing will be as follows.

The pits will be filled with soil mixture. The soil will be irrigated soaking wet prior to placing of seedling. The water required for greenbelt development will be met from the treated effluents generated during plant operation. During construction period water supply will be met from available sources.

Plantation will start from the beginning of construction activity (after the site is made clear and demarcating the green portion). The plant species will be planted using pitting technique Soil proposed to be filled in the pit after plantation will be mixed with compost (1:1). Plantation will be done after first rainfall. Adequate protection will be ensured for achieving high survival rate of the planted saplings. Water and nutrients / manure will be given at appropriate intervals.

10.5.2 ACTION PLAN FOR GREENBELT DEVELOPMENT

The green area measures **37,241.664** sq.m. Greenbelt will be developed around the in and around the project site. There are few trees present at the project site. We will obtained permission for the same from competent authority.

- The tree species to be selected for the plantation are pollutant tolerant, fast growing, wind firm, deep rooted. A three-tire plantation is proposed comprising of an outer most belt of taller trees, which will act as barrier, middle core acting as air cleaner and the innermost core which may be termed as absorptive layer consisting of trees which are known to be particularly tolerant to pollutants.
- Greenbelt will be developed simultaneously with the construction of the plant as per SPCB guidelines and completed within the end of first monsoon.
- 6870 plants will be planted as per the norms.

10.6 RAINWATER HARVESTING PLAN

Company will develop rainwater harvesting structures inside the project premises, where rainwater will be collected. As per CGWB guidelines shaft recharge type rainwater harvesting structures will be suitable for the area. The design of the pits and tanks shall be based on CGWB guidelines (the rainfall collection volume from a defined area multiplied by runoff coefficient). Total of 65 Rainwater Harvesting pits are proposed for artificial ground water recharge.

10.7 BUDGET FOR EMP

The total cost (Land Cost + Development Cost) of the proposed project will be INR 1593.7 Crores. The capital cost for environmental management of the proposed project is estimated to be INR 796 lakhs (Construction and operation). INR 132.75 lakhs (operation and construction) per year will be required as annual recurring expenses to meet the recurring expenditure for implementing the measures.

Table 10-1 ENVIRONMENT MANAGEMENT PLAN BUDGET

COMPONENT	CAPITAL COST (INR LAKH)	RECURRING COST (INR LAKH/YR)
Labor Sanitation & Wastewater Management	35	8.75
Dust Mitigation Measures Including site barricading, water sprinkling & anti-smog gun)	25	6
Storm Water Management (temporary drains & sedimentation basin)	10	2.5
Solid Waste Management	5	1
TOTAL	**75**	**18.25**

During Operation Phase		
COMPONENT	**CAPITAL COST (INR LAKH)**	**RECURRING COST (INR LAKH/YR)**
Sewage Treatment Plant	190	47.5
Rain Water Harvesting System	115	28.75
Solid Waste Management	80	20
Environmental Monitoring	6	9
Green Area/ Landscape Area	50	12.5
Others (Energy saving System, miscellaneous)	60	15
Sub-Total	**576**	**108**
Socio-Economic		
Government Sr. Sec School at Village Rewari/	145	--

Shidrawali/ Dhani Bhora Khurd / or in any nearby village • Complete makeover • Construction of toilets • Installation of Solar Panels • Painting of School Building • Replacement of doors and windows • Energy efficient lighting • Smart Classroom equipment		
Total	**721**	**108**

TOTAL EMP BUDGET		
COMPONENT	**CAPITAL COST (INR LAKH)**	**RECURRING COST (INR LAKH/YR)**
During Construction Phase	75	18.25
During Operation Phase	721	**108**
TOTAL	**796**	**126.25**

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CHAPTER-11 : SUMMARY & CONCLUSION

11.1 GENERAL

This chapter provides the summary of the EIA/EMP report.

11.2 PROJECT DESCRIPTION

The Industrial Plotted Colony Project is to be developed by M/s Signatureglobal (India) Limited. The project site is located at Village- Shidrawali, Tehsil-Manesar, District-Gurugram, Haryana on a land measuring of 135.7250 acres.

The company has vast experience in planning and construction of Industrial Plotted Colony. The project facilities include:

- Industrial Plotted Development
- Residential Plotted Development
- Community facilities
- Commercial facilities

The Nearest Highway is NH-48 which is adjacent to the project site , SH-28 is 0.58 km towards SW direction, SH-25 which is 4.1 km (S), NH-919 is 3.8 km towards S direction, Western Peripheral Expressway is 8.7 km towards NE direction, MDR 132 is 5.1km towards NE direction, & NH-352W which is 9.5 km (S) direction away from project site.
The nearest railway station being Inchhapuri Railway Station is about 12.6 km (NW) away from the project site.
The nearest Airport is Indira Gandhi International Airport 40 km (NE) from the project site.
Total Project cost is INR 1593.7 crores.

During the operation phase, total population of the proposed project is estimated to be 50,766 persons.

The total water requirement for the project will be approx. 3475 KLD. Fresh water demand is 1943KLD. The source of water supply will be GMDA.

The power shall be supplied by the State Electricity Board. The maximum load demand for the project will be approx. 12,883 kW.

There is provision of 2no. of DG set of total capacity 1100kVA for Commercial Facility which includes 1 x 750kVA +1x 350 kVA and 2no. of DG set of total capacity 1750 kVA for Common Services which includes 1 x 750kVA +1x 1000 kVA are proposed for power back up. The DG sets will be equipped with acoustic enclosure to minimize noise generation and adequate stack height for proper dispersion.

During the operation phase, approx. 18139 kg/day of domestic waste will be generated.

Total no. of 65 Rainwater Harvesting pits are proposed for artificial ground water recharge.

11.3 DESCRIPTION OF BASELINE ENVIRONMENT

Baseline data was generated during winter season from 1st December 2023 to 29th February, 2024. 10 km area around the site was considered as study area. Data was generated by following the standard/ approved procedures of the Ministry of Environment Forests and Climate Change and the Central Pollution Control Board. Meteorological data on wind speed, wind direction, relative humidity and temperature was generated at the project site. Ambient air quality was generated at 5 locations. Noise levels were measured at 5 locations. Surface water quality was collected and analysed at 5 locations; Groundwater quality was analysed at 5 locations. Soil quality was analysed at 5 locations. Data on plants and animals present in the study area was collected from the District Forest Department. Data on landuse, demography, occupation pattern, cropping pattern, infrastructure facilities were collected from District Statistics Handbook and the Tehsil records.

The predominant wind direction is from NW direction towards southeast direction. Annual rainfall is high, about 596 mm. Calm periods are more during night.

Ambient Air Quality Monitoring reveals that the minimum and maximum concentrations of $PM_{2.5}$ for all the 05 AAQM stations were found to be 59.7 $\mu g/m^3$ to 103.7 $\mu g/m^3$ respectively, while for PM_{10} it varies between 117.2 $\mu g/m^3$ to 183.7 $\mu g/m^3$.

As far as the gaseous pollutants SO_2 and NO_2 are concerned, the prescribed CPCB limit of 80 $\mu g/m^3$ for residential, rural and industrial areas has never surpassed at any station. The minimum and maximum concentrations of SO_2 were found to be 8.2 $\mu g/m^3$ to 12.7 $\mu g/m^3$ respectively. The minimum and maximum concentrations of NO_2 were found to be 26.3 $\mu g/m^3$ to 50.1 $\mu g/m^3$ respectively. Also, the minimum and maximum concentrations of CO were found to be 450$\mu g/m^3$ to 1030$\mu g/m^3$ respectively.

High concentration of PM 2.5 and PM 10 may be attributed to Vehicular emission and nearby construction activities in the area.

In rural areas wind blowing and chirping of birds would contribute to noise levels especially during the nights. Assessment of day noise levels around the study area range between 50.5 to 63.6dB(A) during study period whereas the night equivalents were in the range of 42.7 to 52.9 dB (A).

The surface water quality meets the 'C' category classification i.e. Best Designated Use of CPCB, fit for drinking after conventional treatment.

The analysis of results shows that soil is basic in nature as pH value ranges from 7.59 to 7.88 with Electrical Conductivity of 437 to 447 µmhos/cm. The concentration of Nitrogen, Phosphorus and Potassium has been found to be in good amount in the soil samples. Soil texture is Sandy loam at project site.

11.4 ENVIRONMENTAL MONITORING PROGRAM

Environmental Management Cell (EMC) will be set up to undertake routine environmental monitoring. Monitoring will be done to ensure compliance with the prescribed laws and standards. The Head of EMC will report to the Management. Environmental monitoring of

ambient air, DG stack emission, noise levels, groundwater quality, surface water quality and soils will be carried out as per norms.

11.5 ADDITIONAL STUDIES

INR 220 Lakh will be spent under CER activities over three year period. This amount will be spent for making classrooms in local schools, providing teaching aids, making community centres, develop drinking water facility in nearby villages, making rainwater harvesting structures like anicuts and check dams in the area, developing infrastructure facilities and equipment in primary health centres.

11.6 PROJECT BENEFITS

The proposed project will generate employment opportunities to the local populace during construction phase. The total manpower requirement during construction is about 200 people. This will last for approximately 12 months. Skilled, unskilled and semi-skilled labour for constructing the plant will be taken locally or from nearby places.

Estimated manpower requirement after the project operation shall be 61489(Direct on Company payroll). About 200 workers will get indirect employment through contractors, like drivers, attendants, mechanics, daily wage labour, housekeeping, horticulture staff, etc. Local people will be given the opportunity in employment as per their capability and expertise.

11.7 ENVIRONMENTAL MANAGEMENT PLAN

Environmental Management Plan for effective management of environmental impacts and ensuring overall protection of the environment through appropriate management procedures has been developed. In order to implement the recommended mitigation measures and institutionalize the EMP, budgetary provision of Rs. 796 lakhs as capital expenditure has been made. Recurring annual expenditure will be Rs. 126.25 lakhs of the capital expenditure.

Environment Management Cell (EMC) will ensure that all air pollution control devices, effluent treatment plants and water re-circulating systems function effectively. EMC will also supervise disposal of spent oil and lubricants and used batteries to the authorized vendors. Plantation will be started during the construction phase by following the guidelines issued by the Central Pollution Control Board. Schemes for resource conservation (raw materials, water, etc.), rainwater harvesting, and social forestry development will be taken up by EMC. Regular environmental awareness programs for the employees will be conducted.

11.8 CONCLUSION

The proposed project will have marginal impact on the local environment with proper mitigation measures and effective implementation of the environment management

measures. The project has beneficial impact/effects in terms of growth in regional economy, transform the region's economy from predominantly agricultural to significantly industrial, increase Government earnings and revenues and accelerate the pace of industrial development in the region.

The proposed project will provide direct employment to a large number of personnel. This project will also generate indirect employment to a considerable number of families, who will render their services for the employees of the project.

The project will provide comfortable and environment friendly housing facilities for the society.

In view of the above, it is requested that Environment Clearance may please be accorded to the project.

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CHAPTER-12 : DISCLOSURE OF CONSULTANT ENGAGED

12.1 GENERAL

M/s Signatureglobal India Limited has appointed M/s GRC India Pvt Ltd., for carrying out this Environmental Impact Assessment Study as per the EIA notification, 2006 as amended till date. M/s GRC India Pvt Ltd has approved EIA coordinators and Functional Area Experts for undertaking Environmental and related studies in Fifteen (15) approved sectors by NABET, Quality Council of India, New Delhi.

12.2 INTRODUCTION OF ORGANIZATION

GRC India is an ISO 9001:2015, 14001:2015 & ISO 45000:2018 certified pioneer environmental consultancy organization in India. It has been accredited by National Accreditation Board of Education & Training (NABET), Quality Council of India (QCI), which is the highest accreditation authority in India. Accreditation is the formal recognition by an accreditation authority to carry out a specific service in accordance with the standards and technical regulations as prescribed in the scope of accreditation. The accreditation permits the organization to carry out the Environment Impact Assessment (EIA) Studies for obtaining an Environmental Clearance for various development projects. This has been granted following a rigorous inspection based on a number of quality parameters applicable to concerned Environmental Functional Areas and the required infrastructure facilities available in the organization, as prescribed by the MoEF & CC, Govt. of India in its guidelines.

The accreditation certificate number is NABET/EIA/21-24/RA 0211. The Validity Extension letter no. is QCI/NABET/ENV/ACO/24/3338 which is valid till 11th November 2024. Copy of NABET certificate is attached as Annexure with EIA report.

Current Status of ACO is available on below given link: -

http://eia.nabet.qci.org.in/Accredited_EIA_Consultant.aspx

12.3 ADDRESS & CONTACT

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F-374 &375, Sector – 63, Noida-201301, UP
Phone: 91-120-4044630, 4044660, 4323120
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E-Mail: info@grc-india.com

Registered Office

Unit No.102, First Floor, Vardhman Mayur Market,
CSC-1, Mayur Vihar Phase 3, New Delhi – 110096,
Ph: 91-11-22622031

12.4 EIA COORDINATOR AND TEAM MEMBER

The EIA/EMP report has been prepared under the guidance of following Coordinators & Functional Area Experts:

EIA Coordinator	***Mr. Sonu***	***Coordinated the EIA Study with FAEs and Laboratory for data generation, assessment of impacts and preparation of EMP.***
FAE-AP	Ms. Monika Gupta	➢ Identifying the sources of emissions and mitigation measures. ➢ Inventorisation of point source stack emission details ➢ Site specific micro- meteorology monitoring. ➢ Ambient Air Quality (AAQ) monitoring impact predictions and mitigations
FAE-WP	Mr. Sonu	➢ Surface water and ground water quality monitoring and assessment. impacts on water ➢ Environment and mitigations. ➢ Identification, characterization of effluent streams and treatments thereof. ➢ Water balance and conservation measures
FAE-AQ	Mr. Sonu	➢ Visited the site and surroundings, assessed the meteorological data, did predictions on air quality and suggested mitigation measures.
FAE-EB	Ms. Kavita Chopra	➢ Biological environment status in respect of terrestrial fauna and aquatic eco system. ➢ Impact on ecological environment.
FAE-SE	Mr Rajiv Rastogi	➢ Determination of baseline human environment. ➢ Impact on socioeconomic environment & mitigation methods.
FAE-HG	Prof. Tapan Majumder	➢ Ground water resource assessment. ➢ Impact on ground water potential and mitigation measures for avoiding ground water contamination.
FAE-GEO	Prof. Tapan Majumder	➢ Topography and geological aspects ➢ Developing geological maps
FAE-RH	Mr. K.D Choudhury	➢ Visited the site and surroundings, assessed the process details, identified risks / hazards and suggested mitigation measures.
FAE-SHW	Dr. Dhiraj Kr Singh	➢ Non-hazardous solid, wastes generation, recycling and disposal. ➢ Storage and management of hazardous solid waste
FAE- SC	Mr. N P S Varde	➢ Monitoring, analysis & characterization of soil. ➢ Assessment of impact on soil quality and mitigation

EIA Coordinator	***Mr. Sonu***	***Coordinated the EIA Study with FAEs and Laboratory for data generation, assessment of impacts and preparation of EMP.***
		measures.
FAE – NV	Mr. K.D Choudhury	➢ Analysis of ambient noise quality data. ➢ Impact due to plant noise and abatement measures.
FAE – LU	Mr. N P S Varde	➢ Analysis of data related to land-use pattern. ➢ Land-use map development. ➢ Impact on land environment in respect to land form change

Apart from EIA Coordinator and FAE's involved in the project the other technical staff involved in the preparation of EIA is listed below: -

Name of Internal Team Member	Activity / Area	Involvement – Actual Work Performed	Under Approved Expert
Ms. Kavita Chopra (Team Member: AP)	Assistance in Air Pollution part under approved expert Ms. Monika Gupta	➢ Identifying the sources of emissions and mitigation measures. ➢ Inventorisation of point source stack emission details ➢ Site specific micro-meteorology monitoring. ➢ Ambient Air Quality (AAQ) monitoring impact predictions and mitigations	Ms. Monika Gupta

12.5 LABORATORY INVOLVED FOR BASELINE MONITORING AND OTHER ANALYSIS

Baseline Monitoring has been done during December 23 to February 24 by M/s GRC India Training & Analytical Laboratory (A Unit of GRC India Pvt Ltd), accredited by NABL and Recognized by MoEFCC, New Delhi.

----------x----------

~~350~~
-344-

Bond

Indian-Non Judicial Stamp
Haryana Government

Date :13/08/2024

Certificate No. G0M2024H3380

GRN No. 120100420

Stamp Duty Paid : ₹ 101
(Rs. Only)

Penalty :₹ 0
(Rs. Zero Only)

Deponent

Name: Signatureglobal India Ltd
H.No/Floor : Na Sector/Ward : Na Landmark : Na
City/Village : Gurugram District : Gurugram State : Haryana
Phone : 98******52

Purpose : AFFIDAVIT **to be submitted at Others**

AFFIDAVIT

I Vineet Kumar S/o Shri Pop Singh of M/s Signatureglobal India Limited., having its registered office at 13th floor Dr. Gopal Das Bhawan .28 Barakhamba Road, Connaught place, New Delhi-110001 do hereby solemnly affirm, declare & undertake as given below:

1. That we are going to construct the Industrial Plotted Colony Project at Village – Shidrawali, Tehsil –Manesar, District -Gurugram Haryana,
2. That the company has not commenced any construction work at the project site we shall commence work only after obtaining the Environmental Clearance and receipt of all applicable NOC's/permission from the prescribed/ competent authorities of state and Centre Govt.
3. That we will install 3 OWCs for disposal of organic waste.
4. That, we will not do the construction below the HT line.
5. That, if services are not available at the time of operation then we will obtain permission from HWRA.
6. That, there are few trees present at the project site which will be transplanted in the greenbelt.
7. That, Sultanpur Bird Sanctuary is 23.30 km (NNE Direction) away from the project site. It is not falling in study area.
8. There is no litigation pending against Industrial Plotted Colony Project at Village–Shidrawali, Tehsil–Manesar, District-Gurugram Haryana by M/s Signatureglobal India Limited and that for any such litigation whatsoever, the sole responsibility will be borne by the project proponent.

NOTARY
Mahender S. Punia
Gurugram
Regn. No. 3999
GOVT. OF INDIA

Signatureglobal (India) Ltd.

Signatureglobal (India) Ltd.

~~361~~
345

DEPONENT
Name: Vineet Kumar
Designation: Authorized Signatory

VERIFICATION:-

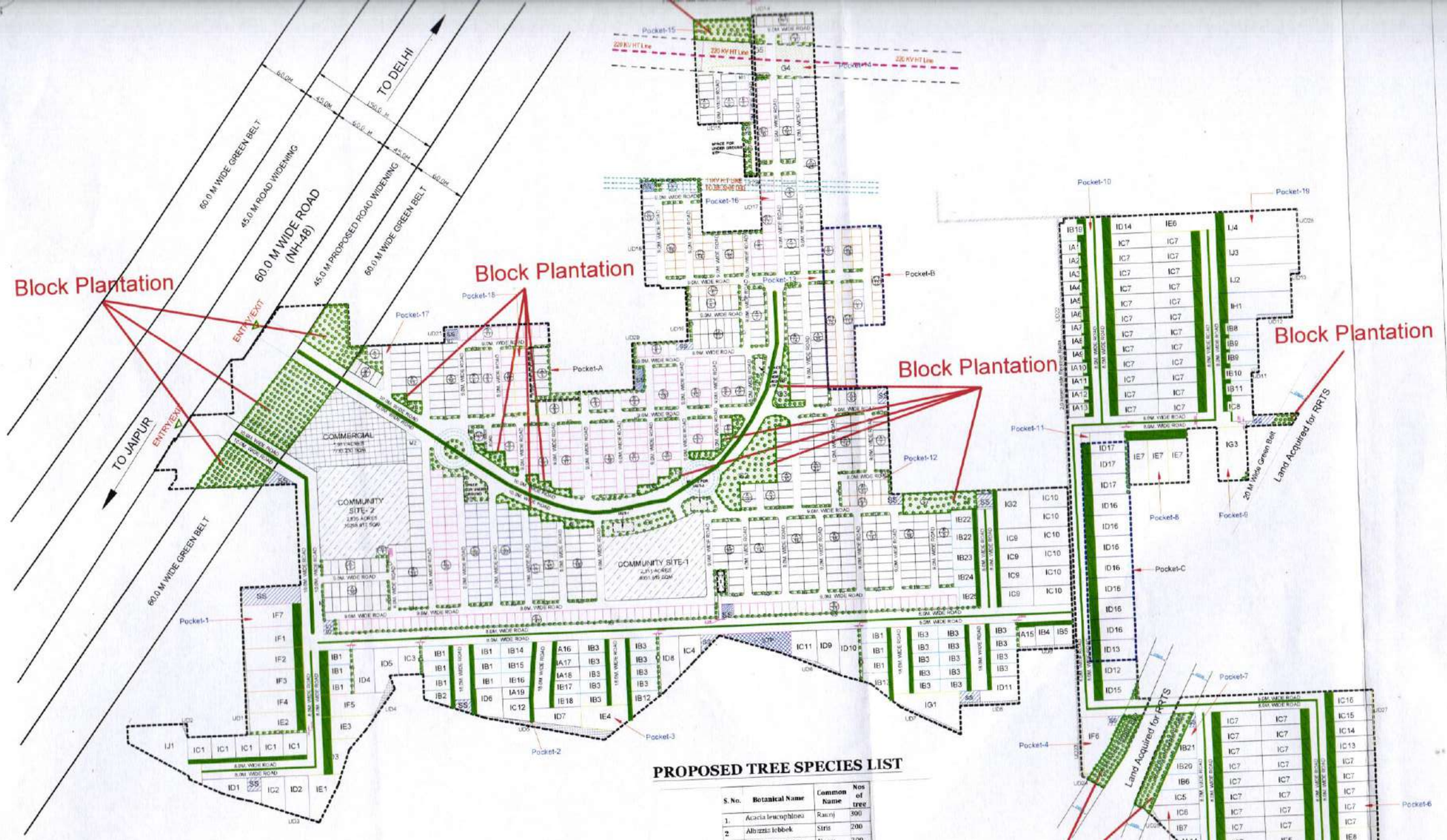
VERIFIED at ..... on this .....2024 that the contents of para no.1 to para. No 7 of the above undertaking are true and correct to the best of my knowledge and records. No part of it is false and nothing has been concealed therein.

DEPONENT
Name: Vineet Kumar
Designation: Authorized Signatory

NOTARY
Mahender S. Punia
Gurugram
Regn. No. 3999
GOVT. OF INDIA

ATTESTED
MAHENDER S. PUNIA
ADVOCATE & NOTARY
DISTT. GURGAON (Haryana) India

27 DEC 2024



GREEN AREA DETAILS:-

Total Licensed area = 5,49,258.716 SQM.

PROPOSED TREE SPECIES LIST

S. No.	Botanical Name	Common Name	Nos of tree
1.	Acacia leucophloea	Rainj	300
2.	Albizzia lebbek	Siris	200
3	Azadirachta indica	Neem	300
4	Anogeissus pendula	Dhauk	200
5	Bombax ceiba	Semal	400
6	Boswellia aserrata	Salai	200
7.	Butea monosperma	Dhak	200
8.	Cassia fistula	Amaltas	300
9.	Cordia dichotoma	Lasura	300
10.	Dalbergia sissoo	Shisham	300
11.	Holoptelia integrifolia	Papri	300
12.	Kigelia pinnata	Kigelia	500
13.	Melia azedarach	Bakain	500
14.	Pongamia pinnata	Papri, Karanj	300
		Total	300

Plot legend:-

TYPE-A - 9.0x16.65 M

TYPE-B - 9.0x13.90 M

OWNER :

SUNGOLD HEIGHTS DEVELO
COLLABRATION WITH SIGN
(INDIA) LIMITED

PROJECT :

PROPOSED LAYOUT PLAN FO
MEASURING 6.06875 ACRES
LICENSED AREA OF 129.65625
LICENSE NO. OF DATE
135.7250 ACRES IN VILLAGE
MANESAR, DISTRICT GURUGRA
BY SIGNATUREGLOBAL (INDIA)

DRAWING TITLE :

LAYOUT PL

611

Annexure-IX

ENVIRONMENTAL MANAGEMENT PLAN WITH BUDGETARY ESTIMATE

The cost of the project is proposed to be INR 1593.76 Crores. The capital cost for environmental management of the proposed project is estimated to be INR 797 lakhs. INR 189.5 lakhs per year will be required as annual recurring expenses to meet the recurring expenditure for implementing the measures.

DURING CONSTRUCTION PHASE		
COMPONENT	**CAPITAL COST (INR LAKH)**	**RECURRING COST (INR LAKH/YR)**
Labor Sanitation & Wastewater Management	15	3.75
Dust Mitigation Measures Including site barricading, water sprinkling and anti-smog gun)	15	3.75
Storm Water Management (temporary drains and sedimentation basin)	10	2.5
Solid Waste Management	5	1.25
TOTAL	**45**	**11.25**

During Operation Phase		
COMPONENT	**CAPITAL COST (INR LAKH)**	**RECURRING COST (INR LAKH/YR)**
Sewage Treatment Plant	320	80
Rainwater Harvesting System	140	35
Solid Waste Management	105	26.25
Environmental Monitoring	0	9
Green Area/ Landscape Area	102	25.5
Others (Energy saving System, miscellaneous)	10	2.5
Sub-Total	**677**	**178.25**
CER		
Govt. Sr. Sec. School, Sidhrawali ❖ Complete makeover ❖ Construction of toilets ❖ Installation of Solar Panels	50	--

❖ Painting of School Building ❖ Replacement of doors and windows ❖ Energy efficient lighting ❖ Smart Classroom equipment		
Aravali Safari and Aravali Green Wall Funds	**25**	--
Total	**752**	**178.25**

TOTAL EMP BUDGET		
COMPONENT	**CAPITAL COST (INR LAKH)**	**RECURRING COST (INR LAKH/YR)**
During Construction Phase	45	11.25
During Operation Phase	752	178.25
TOTAL	**797**	**189.5**





B P G & CO.
Chartered Accountants

RR-12, [illegible], Mianwali Nagar,
Peergarhi, New Delhi - 110087
Tel. : 011-45017993
(M) : 9250380199
E-mail : cabpg.co@gmail.com

Annexure-X

TO WHOMSOEVER IT MAY CONCERN

We, B P G & CO., Chartered Accountants confirm that on the basis of records and information & explanation given to us by the management of M/S Signatureglobal India Limited (formerly known as Signatureglobal India Private Limited) ("the Company") having its registered office at 13th Floor, DR. Gopal Das Bhawan, 28 Barakhamba Road, Connaught Place, New Delhi, the approximated project cost in respect of project to be developed by the Company at Village Sidhrawali, Gurugram, are mentioned below:-

S.NO	Particulars	Amount (Rs. In Crores)
1	Land / Collaboration Cost	1127.87
2	Construction Cost	428.29
3	Selling, administration and other costs relating to project	37.60
	Total	**1,593.76**

This certificate is being issued on the specific request of the company and information provided to us and relied upon by us.

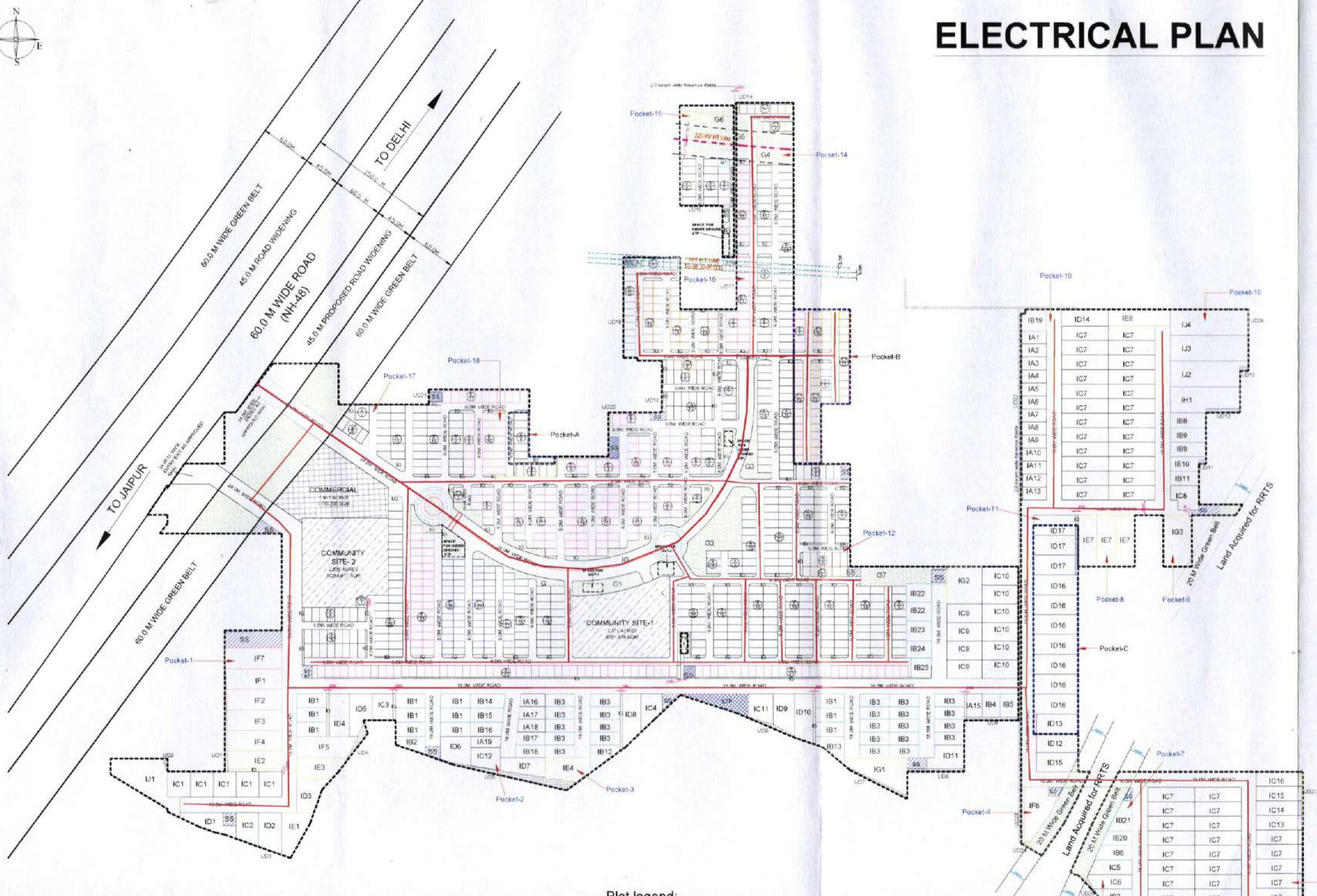
For B P G & CO
Chartered Accountants
F.R.No.026707N

Pankaj Garg
Prop.
M.No. 520782
UDIN: 24520782BKASHJ3428

Place: New Delhi
Date: 06.03.2024

Signatureglobal (India) Ltd.

ELECTRICAL PLAN



Plot legend:

OWNER :
SUNCOLD HI
COLLABRATI
(I) PVT. LIMIT

PROJECT :

615

GRC INDIA TRAINING & ANALYTICAL LABORATORY
(A unit of Grass Roots Research & Creation India (P) Ltd.)
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Phone No.: 0120 - 4044630, 4044660, 4323120, Fax: 0120 - 2406519, 0120 - 4044675
Website: https://www.grc-india.com, E-mail : lab@grc-india.com; info@grc-india.com

Annexure-XII

TC-7501

Test Report

Report Code: GW20231220-049(A)

Issue Date: 20.12.2023

Issued To: Industrial Park Project by M/s Signature, Global (India) Ltd. at Village-Shidrawali, Distt. Gurugram, Haryana.

Sample Description: Ground Water

Sample Received on: 04.12.2023
Analysis Duration: 05.12.2023 to 19.12.2023

RESULTS

Water Quality Analysis

SAMPLING DETAILS

Date of Sampling	: 04.12.2023
Sampling Location	: Near Project site
Sample Collected by	: Mr. Maan Singh
Sampling Protocol	: IS-17614 (Part-1):2021
Weather Condition	: Clear Sky
Sample Quantity	: 5 L
Sample Packing & Mark	: Plastic Bottle & SGIL/DEC/GW-01

S. No.	Parameters	Units	Limits (as per IS:10500-2012)		Results	Test Method
			Desirable Limit	Permissible Limit		
1	Color	Hazen	5	15	<5	IS 3025 (Part-4): 2021
2	Odour	-	Agreeable	Agreeable	Agreeable	IS 3025 (Part-5): 2018
3	Turbidity	NTU	1	5	<1	IS 3025 (Part-10): 1984, RA 2017
4	pH Value	-	6.5-8.5	No Relaxation	7.88	IS 3025 (Part-11): 2022
5	Total Dissolved Solids	mg/l	500	2000	1420	IS 3025 (Part-16): 2023
6	Total Hardness (as CaCO3)	mg/l	200	600	413	IS 3025 (Part-21): 2009, RA 2019
7	Total Alkalinity (as CaCO3)	mg/l	200	600	426	IS 3025 (Part-23): 1986, RA 2019
8	Chlorides (as Cl)	mg/l	250	1000	343	IS 3025 (Part-32): 1988, RA 2019
9	Fluoride (as F)	mg/l	1	1.5	0.7	4500F-D, APHA 24th Ed. 2023
10	Calcium (as Ca2+)	mg/l	75	200	100	IS 3025 (Part-40): 1991, RA 2019
11	Magnesium (as Mg2+)	mg/l	30	100	40	IS 3025 (Part-46): 1994, RA 2019
12	Sulphate (as SO4)	mg/l	200	400	160	IS 3025 (Part-24/Sec-1): 2022
13	Nitrate (as NO3)	mg/l	45	No Relaxation	18	IS 3025 (Part-34/Sec-3): 2021
14	Iron (as Fe)	mg/l	1	No Relaxation	0.68	3120-B, APHA 24th Ed. 2023 (ICP-OES)
15	Aluminum (as Al)	mg/l	0.03	0.2	<0.01	3120-B, APHA 24th Ed. 2023 (ICP-OES)
16	Copper (as Cu)	mg/l	0.05	1.5	<0.01	3120-B, APHA 24th Ed. 2023 (ICP-OES)
17	Manganese (as Mn)	mg/l	0.1	0.3	<0.01	3120-B, APHA 24th Ed. 2023 (ICP-OES)

Rahul Singh (Sr. Chemist)
Authorized Signatory
(Seal & Signature)

Note: 1. The results indicated only refer to the tested samples and listed parameters and do not endorse any product
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3. This certificate shall not be used in any advertising media or as evidence in the court of Law without prior written consent of the laboratory
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Phone No.: 0120 - 4044630, 4044660, 4323120, Fax: 0120 - 2406519, 0120 - 4044675
Website: https://www.grc-india.com, E-mail : lab@grc-india.com; info@grc-india.com
TC-7501

Test Report

Report Code: GW20231220-049(A) **Issue Date: 20.12.2023**

18	Boron (as B)	mg/l	0.5	1	<0.01	3120-B, APHA 24th Ed. 2023 (ICP-OES)
19	Zinc (as Zn)	mg/l	5	15	<0.01	3120-B, APHA 24th Ed. 2023 (ICP-OES)
20	Selenium (as Se)	mg/l	0.01	No Relaxation	<0.01	3120-B, APHA 24th Ed. 2023 (ICP-OES)
21	Arsenic (as As)	mg/l	0.01	0.05	<0.01	3120-B, APHA 24th Ed. 2023 (ICP-OES)
22	Cadmium (as Cd)	mg/l	0.003	No Relaxation	<0.001	3120-B, APHA 24th Ed. 2023 (ICP-OES)
23	Total Chromium (as Cr3+)	mg/l	0.05	No Relaxation	<0.01	3120-B, APHA 24th Ed. 2023 (ICP-OES)
24	Cyanide (as CN)	mg/l	0.05	No Relaxation	<0.01	IS 3025 (Part-27): 1986, RA 2019
25	Lead (as Pb)	mg/l	0.01	No Relaxation	<0.01	3120-B, APHA 24th Ed. 2023 (ICP-OES)
26	Mercury (as Hg)	mg/l	0.001	No Relaxation	<0.001	3120-B, APHA 24th Ed. 2023 (ICP-OES)
27	Nickel (as Ni)	mg/l	0.02	No Relaxation	<0.01	3120-B, APHA 24th Ed. 2023 (ICP-OES)
28	Phenolic Compounds (as C6H5OH)	mg/l	0.001	0.002	<0.001	IS 3025 (Part-43): 2022
29	Anionic Detergent (as MBAS)	mg/l	0.2	1	<0.01	IS 3025 (Part-68): 2019
30	Silica (as SiO2)	mg/l	--	--	5.4	4500-SiO2 (C/D), APHA 24th Ed. 2023
31	Phosphate (as PO4)	mg/l	--	--	1.1	4500-P D, APHA 24th Ed. 2023
32	Specific Conductivity	µS/cm	-	-	2130	IS 3025 (Part-14): 2013, RA 2019

** End of Report **

Signatureglobal (India) Pvt. Ltd.

Rahul Singh (Sr. Chemist)
Authorized Signatory
(Seal & Signature)

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Website: https://www.grc-india.com, E-mail : lab@grc-india.com; info@grc-india.com
TC-7501

Test Report

Report Code: GW20231209-049(B)

Issue Date: 09.12.2023

Issued To: Industrial Park Project by M/s Signature, Global (India) Ltd. at Village-Shidrawali, Distt. Gurugram, Haryana.

Sample Description: Ground Water

Sample Received on: 04.12.2023
Analysis Duration: 05.12.2023 to 08.12.2023

RESULTS

Water Quality Analysis

SAMPLING DETAILS

Date of Sampling	: 04.12.2023
Sampling Location	: Near Project Site
Sample Collected by	: Mr. Maan Singh
Sampling Protocol	: IS 1622: 1981, RA 2019
Weather Condition	: Clear Sky
Sample Quantity	: 500 ml
Sample Packing & Mark	: Glass Bottle & SGIL/DEC/GW-01

S. No.	Parameters	Units	Limits (as per IS 10500: 2012)	Results	Test Method
1	Total Coliform	MPN/100ml	shall not be detectable	Not Detected (<2)	IS 1622: 1981, RA 2019
2	E. coli	MPN/100ml	shall not be detectable	Absent (<2)	IS 1622: 1981, RA 2019)

**** End of Report ****

Signatureglobal (India) Ltd.

Ajay Kumar Sharma
(Quality Manager)
Authorized Signatory
(Seal & Signature)

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Save Globe®
GRC India

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Website: https://www.grc-india.com, E-mail : lab@grc-india.com; info@grc-india.com

TC-7501

Test Report

Report Code: GW20231220-050(A)

Issue Date: 20.12.2023

Issued To: Industrial Park Project by M/s Signature, Global (India) Ltd. at Village-Shidrawali, Distt. Gurugram, Haryana.

Sample Description: Ground Water

Sample Received on: 04.12.2023
Analysis Duration: 05.12.2023 to 19.12.2023

RESULTS

Water Quality Analysis

SAMPLING DETAILS

Date of Sampling	: 04.12.2023
Sampling Location	: Borewell Village Kapriwas
Sample Collected by	: Mr. Maan Singh
Sampling Protocol	: IS-17614 (Part-1):2021
Weather Condition	: Clear Sky
Sample Quantity	: 5 L
Sample Packing & Mark	: Plastic Bottle & SGIL/DEC/GW-02

S. No.	Parameters	Units	Limits (as per IS:10500-2012)		Results	Test Method
			Desirable Limit	Permissible Limit		
1	Color	Hazen	5	15	<5	IS 3025 (Part-4): 2021
2	Odour	-	Agreeable	Agreeable	Agreeable	IS 3025 (Part-5): 2018
3	Turbidity	NTU	1	5	<1	IS 3025 (Part-10): 1984, RA 2017
4	pH Value	-	6.5-8.5	No Relaxation	7.93	IS 3025 (Part-11): 2022
5	Total Dissolved Solids	mg/l	500	2000	1450	IS 3025 (Part-16): 2023
6	Total Hardness (as CaCO3)	mg/l	200	600	447	IS 3025 (Part-21): 2009, RA 2019
7	Total Alkalinity (as CaCO3)	mg/l	200	600	478	IS 3025 (Part-23): 1986, RA 2019
8	Chlorides (as Cl)	mg/l	250	1000	330	IS 3025 (Part-32): 1988 , RA 2019
9	Fluoride (as F)	mg/l	1	1.5	0.6	4500F-D, APHA 24th Ed. 2023
10	Calcium (as Ca2+)	mg/l	75	200	107	IS 3025 (Part-40): 1991, RA 2019
11	Magnesium (as Mg2+)	mg/l	30	100	43	IS 3025 (Part-46): 1994, RA 2019
12	Sulphate (as SO4)	mg/l	200	400	154	IS 3025 (Part-24/Sec-1): 2022
13	Nitrate (as NO3)	mg/l	45	No Relaxation	20	IS 3025 (Part-34/Sec-3): 2021
14	Iron (as Fe)	mg/l	1	No Relaxation	0.56	3120-B, APHA 24th Ed. 2023 (ICP-OES)
15	Aluminum (as Al)	mg/l	0.03	0.2	<0.01	3120-B, APHA 24th Ed. 2023 (ICP-OES)
16	Copper (as Cu)	mg/l	0.05	1.5	<0.01	3120-B, APHA 24th Ed. 2023 (ICP-OES)
17	Manganese (as Mn)	mg/l	0.1	0.3	<0.01	3120-B, APHA 24th Ed. 2023 (ICP-OES)

Rahul Singh (Sr. Chemist)
Authorized Signatory
(Seal & Signature)

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Website: https://www.grc-india.com, E-mail : lab@grc-india.com; info@grc-india.com
TC-7501

Test Report

Report Code: GW20231220-050(A) **Issue Date: 20.12.2023**

18	Boron (as B)	mg/l	0.5	1	<0.01	3120-B, APHA 24th Ed. 2023 (ICP-OES)
19	Zinc (as Zn)	mg/l	5	15	<0.01	3120-B, APHA 24th Ed. 2023 (ICP-OES)
20	Selenium (as Se)	mg/l	0.01	No Relaxation	<0.01	3120-B, APHA 24th Ed. 2023 (ICP-OES)
21	Arsenic (as As)	mg/l	0.01	0.05	<0.01	3120-B, APHA 24th Ed. 2023 (ICP-OES)
22	Cadmium (as Cd)	mg/l	0.003	No Relaxation	<0.001	3120-B, APHA 24th Ed. 2023 (ICP-OES)
23	Total Chromium (as Cr3+)	mg/l	0.05	No Relaxation	<0.01	3120-B, APHA 24th Ed. 2023 (ICP-OES)
24	Cyanide (as CN)	mg/l	0.05	No Relaxation	<0.01	IS 3025 (Part-27): 1986, RA 2019
25	Lead (as Pb)	mg/l	0.01	No Relaxation	<0.01	3120-B, APHA 24th Ed. 2023 (ICP-OES)
26	Mercury (as Hg)	mg/l	0.001	No Relaxation	<0.001	3120-B, APHA 24th Ed. 2023 (ICP-OES)
27	Nickel (as Ni)	mg/l	0.02	No Relaxation	<0.01	3120-B, APHA 24th Ed. 2023 (ICP-OES)
28	Phenolic Compounds (as C6H5OH)	mg/l	0.001	0.002	<0.001	IS 3025 (Part-43): 2022
29	Anionic Detergent (as MBAS)	mg/l	0.2	1	<0.01	IS 3025 (Part-68): 2019
30	Silica (as SiO2)	mg/l	--	--	5.1	4500-SiO2 (C/D), APHA 24th Ed. 2023
31	Phosphate (as PO4)	mg/l	--	--	1.3	4500-P D, APHA 24th Ed. 2023
32	Specific Conductivity	µS/cm	-	-	2170	IS 3025 (Part-14): 2013, RA 2019

** End of Report **

Signatureglobal (India) Pvt. Ltd.

Rahul Singh (Sr. Chemist)
Authorized Signatory
(Seal & Signature)

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TC-7501

Test Report

Report Code: GW20231209-050(B)

Issue Date: 09.12.2023

Issued To: Industrial Park Project by M/s Signature, Global (India) Ltd. at Village-Shidrawali, Distt. Gurugram, Haryana.

Sample Description: Ground Water

Sample Received on: 04.12.2023
Analysis Duration: 05.12.2023 to 08.12.2023

RESULTS

Water Quality Analysis

SAMPLING DETAILS

Date of Sampling	: 04.12.2023
Sampling Location	: Borewell Village Kapriwas
Sample Collected by	: Mr. Maan Singh
Sampling Protocol	: IS 1622: 1981, RA 2019
Weather Condition	: Clear Sky
Sample Quantity	: 500 ml
Sample Packing & Mark	: Glass Bottle & SGIL/DEC/GW-02

S. No.	Parameters	Units	Limits (as per IS 10500: 2012)	Results	Test Method
1	Total Coliform	MPN/100ml	shall not be detectable	Not Detected (<2)	IS 1622: 1981, RA 2019
2	E. coli	MPN/100ml	shall not be detectable	Absent (<2)	IS 1622: 1981, RA 2019)

**** End of Report ****

Signatureglobal (India) Pvt. Ltd.

Ajay Kumar Sharma
(Quality Manager)
Authorized Signatory
(Seal & Signature)

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TC-7501

Test Report

Report Code: GW20231220-051(A)

Issue Date: 20.12.2023

Issued To: Industrial Park Project by M/s Signature Global (India) Ltd. at Village-Shidrawali, Distt. Gurugram, Haryana.

Sample Description: Ground Water

Sample Received on: 04.12.2023
Analysis Duration: 05.12.2023 to 19.12.2023

RESULTS

Water Quality Analysis

SAMPLING DETAILS

Date of Sampling	: 04.12.2023
Sampling Location	: Borewell Village Gurjar Ghatal
Sample Collected by	: Mr. Maan Singh
Sampling Protocol	: IS-17614 (Part-1):2021
Weather Condition	: Clear Sky
Sample Quantity	: 5 L
Sample Packing & Mark	: Plastic Bottle & SGIL/DEC/GW-03

S. No.	Parameters	Units	Limits (as per IS:10500-2012)		Results	Test Method
			Desirable Limit	Permissible Limit		
1	Color	Hazen	5	15	<5	IS 3025 (Part-4): 2021
2	Odour	-	Agreeable	Agreeable	Agreeable	IS 3025 (Part-5): 2018
3	Turbidity	NTU	1	5	<1	IS 3025 (Part-10): 1984, RA 2017
4	pH Value	-	6.5-8.5	No Relaxation	7.89	IS 3025 (Part-11): 2022
5	Total Dissolved Solids	mg/l	500	2000	1440	IS 3025 (Part-16): 2023
6	Total Hardness (as CaCO3)	mg/l	200	600	458	IS 3025 (Part-21): 2009, RA 2019
7	Total Alkalinity (as CaCO3)	mg/l	200	600	487	IS 3025 (Part-23): 1986, RA 2019
8	Chlorides (as Cl)	mg/l	250	1000	335	IS 3025 (Part-32): 1988 , RA 2019
9	Fluoride (as F)	mg/l	1	1.5	0.5	4500F-D, APHA 24th Ed. 2023
10	Calcium (as Ca2+)	mg/l	75	200	110	IS 3025 (Part-40): 1991, RA 2019
11	Magnesium (as Mg2+)	mg/l	30	100	44	IS 3025 (Part-46): 1994, RA 2019
12	Sulphate (as SO4)	mg/l	200	400	136	IS 3025 (Part-24/Sec-1): 2022
13	Nitrate (as NO3)	mg/l	45	No Relaxation	19	IS 3025 (Part-34/Sec-3): 2021
14	Iron (as Fe)	mg/l	1	No Relaxation	0.63	3120-B, APHA 24th Ed. 2023 (ICP-OES)
15	Aluminum (as Al)	mg/l	0.03	0.2	<0.01	3120-B, APHA 24th Ed. 2023 (ICP-OES)
16	Copper (as Cu)	mg/l	0.05	1.5	<0.01	3120-B, APHA 24th Ed. 2023 (ICP-OES)
17	Manganese (as Mn)	mg/l	0.1	0.3	<0.01	3120-B, APHA 24th Ed. 2023 (ICP-OES)

Rahul Singh (Sr. Chemist)
Authorized Signatory
(Seal & Signature)

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TC-7501

Test Report

Report Code: GW20231220-051(A) **Issue Date: 20.12.2023**

18	Boron (as B)	mg/l	0.5	1	<0.01	3120-B, APHA 24th Ed. 2023 (ICP-OES)
19	Zinc (as Zn)	mg/l	5	15	<0.01	3120-B, APHA 24th Ed. 2023 (ICP-OES)
20	Selenium (as Se)	mg/l	0.01	No Relaxation	<0.01	3120-B, APHA 24th Ed. 2023 (ICP-OES)
21	Arsenic (as As)	mg/l	0.01	0.05	<0.01	3120-B, APHA 24th Ed. 2023 (ICP-OES)
22	Cadmium (as Cd)	mg/l	0.003	No Relaxation	<0.001	3120-B, APHA 24th Ed. 2023 (ICP-OES)
23	Total Chromium (as Cr3+)	mg/l	0.05	No Relaxation	<0.01	3120-B, APHA 24th Ed. 2023 (ICP-OES)
24	Cyanide (as CN)	mg/l	0.05	No Relaxation	<0.01	IS 3025 (Part-27): 1986, RA 2019
25	Lead (as Pb)	mg/l	0.01	No Relaxation	<0.01	3120-B, APHA 24th Ed. 2023 (ICP-OES)
26	Mercury (as Hg)	mg/l	0.001	No Relaxation	<0.001	3120-B, APHA 24th Ed. 2023 (ICP-OES)
27	Nickel (as Ni)	mg/l	0.02	No Relaxation	<0.01	3120-B, APHA 24th Ed. 2023 (ICP-OES)
28	Phenolic Compounds (as C6H5OH)	mg/l	0.001	0.002	<0.001	IS 3025 (Part-43): 2022
29	Anionic Detergent (as MBAS)	mg/l	0.2	1	<0.01	IS 3025 (Part-68): 2019
30	Silica (as SiO2)	mg/l	--	--	5.3	4500-SiO2 (C/D), APHA 24th Ed. 2023
31	Phosphate (as PO4)	mg/l	--	--	1.1	4500-P D, APHA 24th Ed. 2023
32	Specific Conductivity	µS/cm	-	-	2150	IS 3025 (Part-14): 2013, RA 2019

**** End of Report ****

Signatureglobal (India) Pvt. Ltd.

Rahul Singh (Sr. Chemist)
Authorized Signatory
(Seal & Signature)

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TC-7501

Test Report

Report Code: GW20231209-051(B)

Issue Date: 09.12.2023

Issued To: Industrial Park Project by M/s Signature, Global (India) Ltd. at Village-Shidrawali, Distt. Gurugram, Haryana.

Sample Description: Ground Water

Sample Received on: 04.12.2023
Analysis Duration: 05.12.2023 to 08.12.2023

RESULTS

Water Quality Analysis

SAMPLING DETAILS

Date of Sampling	: 04.12.2023
Sampling Location	: Borewell Village Gurjar Ghatal
Sample Collected by	: Mr. Maan Singh
Sampling Protocol	: IS 1622: 1981, RA 2019
Weather Condition	: Clear Sky
Sample Quantity	: 500 ml
Sample Packing & Mark	: Glass Bottle & SGIL/DEC/GW-03

S. No.	Parameters	Units	Limits (as per IS 10500: 2012)	Results	Test Method
1	Total Coliform	MPN/100ml	shall not be detectable	Not Detected (<2)	IS 1622: 1981, RA 2019
2	E. coli	MPN/100ml	shall not be detectable	Absent (<2)	IS 1622: 1981, RA 2019)

**** End of Report ****

Signatureglobal (India) Ltd.

Ajay Kumar Sharma
(Quality Manager)
Authorized Signatory
(Seal & Signature)

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Test Report

Report Code: GW20231220-052(A)

Issue Date: 20.12.2023

Issued To: Industrial Park Project by M/s Signature Global (India) Ltd. at Village-Shidrawali, Distt. Gurugram, Haryana.

Sample Received on: 04.12.2023

Analysis Duration: 05.12.2023 to 19.12.2023

Sample Description: Ground Water

RESULTS

Water Quality Analysis

SAMPLING DETAILS

Date of Sampling : 04.12.2023
Sampling Location : Borewell Village Sidhrawali
Sample Collected by : Mr. Maan Singh
Sampling Protocol : IS-17614 (Part-1):2021
Weather Condition : Clear Sky
Sample Quantity : 5 L
Sample Packing & Mark : Plastic Bottle & SGIL/DEC/GW-04

S. No.	Parameters	Units	Limits (as per IS:10500-2012)		Results	Test Method
			Desirable Limit	Permissible Limit		
1	Color	Hazen	5	15	<5	IS 3025 (Part-4): 2021
2	Odour	-	Agreeable	Agreeable	Agreeable	IS 3025 (Part-5): 2018
3	Turbidity	NTU	1	5	<1	IS 3025 (Part-10): 1984, RA 2017
4	pH Value	-	6.5-8.5	No Relaxation	7.92	IS 3025 (Part-11): 2022
5	Total Dissolved Solids	mg/l	500	2000	1480	IS 3025 (Part-16): 2023
6	Total Hardness (as CaCO3)	mg/l	200	600	439	IS 3025 (Part-21): 2009, RA 2019
7	Total Alkalinity (as CaCO3)	mg/l	200	600	467	IS 3025 (Part-23): 1986, RA 2019
8	Chlorides (as Cl)	mg/l	250	1000	363	IS 3025 (Part-32): 1988 , RA 2019
9	Fluoride (as F)	mg/l	1	1.5	0.7	4500F-D, APHA 24th Ed. 2023
10	Calcium (as Ca2+)	mg/l	75	200	105	IS 3025 (Part-40): 1991, RA 2019
11	Magnesium (as Mg2+)	mg/l	30	100	42	IS 3025 (Part-46): 1994, RA 2019
12	Sulphate (as SO4)	mg/l	200	400	146	IS 3025 (Part-24/Sec-1): 2022
13	Nitrate (as NO3)	mg/l	45	No Relaxation	21	IS 3025 (Part-34/Sec-3): 2021
14	Iron (as Fe)	mg/l	1	No Relaxation	0.54	3120-B, APHA 24th Ed. 2023 (ICP-OES)
15	Aluminum (as Al)	mg/l	0.03	0.2	<0.01	3120-B, APHA 24th Ed. 2023 (ICP-OES)
16	Copper (as Cu)	mg/l	0.05	1.5	<0.01	3120-B, APHA 24th Ed. 2023 (ICP-OES)
17	Manganese (as Mn)	mg/l	0.1	0.3	<0..1	3120-B, APHA 24th Ed. 2023 (ICP-OES)

Rahul Singh (Sr. Chemist)
Authorized Signatory
(Seal & Signature)

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TC-7501

Test Report

Report Code: GW20231220-052(A) **Issue Date: 20.12.2023**

18	Boron (as B)	mg/l	0.5	1	<0.01	3120-B, APHA 24th Ed. 2023 (ICP-OES)
19	Zinc (as Zn)	mg/l	5	15	<0.01	3120-B, APHA 24th Ed. 2023 (ICP-OES)
20	Selenium (as Se)	mg/l	0.01	No Relaxation	<0.01	3120-B, APHA 24th Ed. 2023 (ICP-OES)
21	Arsenic (as As)	mg/l	0.01	0.05	<0.01	3120-B, APHA 24th Ed. 2023 (ICP-OES)
22	Cadmium (as Cd)	mg/l	0.003	No Relaxation	<0.001	3120-B, APHA 24th Ed. 2023 (ICP-OES)
23	Total Chromium (as Cr3+)	mg/l	0.05	No Relaxation	<0.01	3120-B, APHA 24th Ed. 2023 (ICP-OES)
24	Cyanide (as CN)	mg/l	0.05	No Relaxation	<0.01	IS 3025 (Part-27): 1986, RA 2019
25	Lead (as Pb)	mg/l	0.01	No Relaxation	<0.01	3120-B, APHA 24th Ed. 2023 (ICP-OES)
26	Mercury (as Hg)	mg/l	0.001	No Relaxation	<0.001	3120-B, APHA 24th Ed. 2023 (ICP-OES)
27	Nickel (as Ni)	mg/l	0.02	No Relaxation	<0.01	3120-B, APHA 24th Ed. 2023 (ICP-OES)
28	Phenolic Compounds (as C6H5OH)	mg/l	0.001	0.002	<0.001	IS 3025 (Part-43): 2022
29	Anionic Detergent (as MBAS)	mg/l	0.2	1	<0.01	IS 3025 (Part-68): 2019
30	Silica (as SiO2)	mg/l	--	--	4.8	4500-SiO2 (C/D), APHA 24th Ed. 2023
31	Phosphate (as PO4)	mg/l	--	--	1.3	4500-P D, APHA 24th Ed. 2023
32	Specific Conductivity	µS/cm	-	-	2220	IS 3025 (Part-14): 2013, RA 2019

**** End of Report ****

Signatureglobal (India) Ltd.

Rahul Singh (Sr. Chemist)
Authorized Signatory
(Seal & Signature)

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TC-7501

Test Report

Report Code: GW20231209-052(B)

Issue Date: 09.12.2023

Issued To: Industrial Park Project by M/s Signature Global (India) Ltd. at Village-Shidrawali, Distt. Gurugram, Haryana.

Sample Description: Ground Water

Sample Received on: 04.12.2023
Analysis Duration: 05.12.2023 to 08.12.2023

RESULTS

Water Quality Analysis

SAMPLING DETAILS

Date of Sampling	: 04.12.2023
Sampling Location	: Borewell Village Sidhrawali
Sample Collected by	: Mr. Maan Singh
Sampling Protocol	: IS 1622: 1981, RA 2019
Weather Condition	: Clear Sky
Sample Quantity	: 500 ml
Sample Packing & Mark	: Glass Bottle & SGIL/DEC/GW-04

S. No.	Parameters	Units	Limits (as per IS 10500: 2012)	Results	Test Method
1	Total Coliform	MPN/100ml	shall not be detectable	Not Detected (<2)	IS 1622: 1981, RA 2019
2	E. coli	MPN/100ml	shall not be detectable	Absent (<2)	IS 1622: 1981, RA 2019)

**** End of Report ****

Signatureglobal (India) Pvt. Ltd.

Ajay Kumar Sharma
(Quality Manager)
Authorized Signatory
(Seal & Signature)

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Test Report

Report Code: GW20231220-053(A)

Issue Date: 20.12.2023

Issued To: Industrial Park Project by M/s Signature Global (India) Ltd. at Village-Shidrawali, Distt. Gurugram, Haryana.

Sample Description: Ground Water

Sample Received on: 04.12.2023
Analysis Duration: 05.12.2023 to 19.12.2023

RESULTS

Water Quality Analysis

SAMPLING DETAILS

Date of Sampling	: 04.12.2023
Sampling Location	: Borewell Village Rathiwas
Sample Collected by	: Mr. Maan Singh
Sampling Protocol	: IS-17614 (Part-1):2021
Weather Condition	: Clear Sky
Sample Quantity	: 5 L
Sample Packing & Mark	: Plastic Bottle & SGIL/DEC/GW-05

S. No.	Parameters	Units	Limits (as per IS:10500-2012)		Results	Test Method
			Desirable Limit	Permissible Limit		
1	Color	Hazen	5	15	<5	IS 3025 (Part-4): 2021
2	Odour	-	Agreeable	Agreeable	Agreeable	IS 3025 (Part-5): 2018
3	Turbidity	NTU	1	5	<1	IS 3025 (Part-10): 1984, RA 2017
4	pH Value	-	6.5-8.5	No Relaxation	7.89	IS 3025 (Part-11): 2022
5	Total Dissolved Solids	mg/l	500	2000	1580	IS 3025 (Part-16): 2023
6	Total Hardness (as CaCO3)	mg/l	200	600	466	IS 3025 (Part-21): 2009, RA 2019
7	Total Alkalinity (as CaCO3)	mg/l	200	600	487	IS 3025 (Part-23): 1986, RA 2019
8	Chlorides (as Cl)	mg/l	250	1000	378	IS 3025 (Part-32): 1988 , RA 2019
9	Fluoride (as F)	mg/l	1	1.5	0.06	4500F-D, APHA 24th Ed. 2023
10	Calcium (as Ca2+)	mg/l	75	200	112	IS 3025 (Part-40): 1991, RA 2019
11	Magnesium (as Mg2+)	mg/l	30	100	45	IS 3025 (Part-46): 1994, RA 2019
12	Sulphate (as SO4)	mg/l	200	400	170	IS 3025 (Part-24/Sec-1): 2022
13	Nitrate (as NO3)	mg/l	45	No Relaxation	17	IS 3025 (Part-34/Sec-3): 2021
14	Iron (as Fe)	mg/l	1	No Relaxation	0.49	3120-B, APHA 24th Ed. 2023 (ICP-OES)
15	Aluminum (as Al)	mg/l	0.03	0.2	<0.01	3120-B, APHA 24th Ed. 2023 (ICP-OES)
16	Copper (as Cu)	mg/l	0.05	1.5	<0.01	3120-B, APHA 24th Ed. 2023 (ICP-OES)
17	Manganese (as Mn)	mg/l	0.1	0.3	<0.01	3120-B, APHA 24th Ed. 2023 (ICP-OES)

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Rahul Singh (Sr. Chemist)
Authorized Signatory
(Seal & Signature)

GRC-LAB/QF-039 Rev. 00 Issue Date: 02.07.2018

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NABL Accredited Laboratory (A Constituent Board of QCI), TC 7501 (Chemical & Biological)
Recognized by Ministry of Environment, Forest & Climate Change (MoEF&CC, GOI), under the E (P) Act, 1986
Head Office: F-375, Sector-63, Noida, Gautam Budh Nagar, U.P - 201 301
Phone No.: 0120 - 4044630, 4044660, 4323120, Fax: 0120 - 2406519, 0120 - 4044675
Website: https://www.grc-india.com, E-mail : lab@grc-india.com; info@grc-india.com
TC-7501

Test Report

Report Code: GW20231220-053(A) **Issue Date: 20.12.2023**

18	Boron (as B)	mg/l	0.5	1	<0.01	3120-B, APHA 24th Ed. 2023 (ICP-OES)
19	Zinc (as Zn)	mg/l	5	15	<0.01	3120-B, APHA 24th Ed. 2023 (ICP-OES)
20	Selenium (as Se)	mg/l	0.01	No Relaxation	<0.01	3120-B, APHA 24th Ed. 2023 (ICP-OES)
21	Arsenic (as As)	mg/l	0.01	0.05	<0.01	3120-B, APHA 24th Ed. 2023 (ICP-OES)
22	Cadmium (as Cd)	mg/l	0.003	No Relaxation	<0.001	3120-B, APHA 24th Ed. 2023 (ICP-OES)
23	Total Chromium (as Cr3+)	mg/l	0.05	No Relaxation	<0.01	3120-B, APHA 24th Ed. 2023 (ICP-OES)
24	Cyanide (as CN)	mg/l	0.05	No Relaxation	<0.01	IS 3025 (Part-27): 1986, RA 2019
25	Lead (as Pb)	mg/l	0.01	No Relaxation	<0.01	3120-B, APHA 24th Ed. 2023 (ICP-OES)
26	Mercury (as Hg)	mg/l	0.001	No Relaxation	<0.001	3120-B, APHA 24th Ed. 2023 (ICP-OES)
27	Nickel (as Ni)	mg/l	0.02	No Relaxation	<0.01	3120-B, APHA 24th Ed. 2023 (ICP-OES)
28	Phenolic Compounds (as C6H5OH)	mg/l	0.001	0.002	<0.001	IS 3025 (Part-43): 2022
29	Anionic Detergent (as MBAS)	mg/l	0.2	1	<0.01	IS 3025 (Part-68): 2019
30	Silica (as SiO2)	mg/l	--	--	5.7	4500-SiO2 (C/D), APHA 24th Ed. 2023
31	Phosphate (as PO4)	mg/l	--	--	1.2	4500-P D, APHA 24th Ed. 2023
32	Specific Conductivity	µS/cm	-	-	2360	IS 3025 (Part-14): 2013, RA 2019

** End of Report **

Signature global (India) Ltd.

Rahul Singh (Sr. Chemist)
Authorized Signatory
(Seal & Signature)

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TC-7501

Test Report

Report Code: GW20231209-053(B)

Issue Date: 09.12.2023

Issued To: Industrial Park Project by M/s Signature, Global (India) Ltd. at Village-Shidrawali, Distt. Gurugram, Haryana.

Sample Received on: 04.12.2023

Analysis Duration: 05.12.2023 to 08.12.2023

Sample Description: Ground Water

RESULTS

Water Quality Analysis

SAMPLING DETAILS

Date of Sampling	: 04.12.2023
Sampling Location	: Borewell Village Rathiwas
Sample Collected by	: Mr. Maan Singh
Sampling Protocol	: IS 1622: 1981, RA 2019
Weather Condition	: Clear Sky
Sample Quantity	: 500 ml
Sample Packing & Mark	: Glass Bottle & SGIL/DEC/GW-05

S. No.	Parameters	Units	Limits (as per IS 10500: 2012)	Results	Test Method
1	Total Coliform	MPN/100ml	shall not be detectable	Not Detected (<2)	IS 1622: 1981, RA 2019
2	E. coli	MPN/100ml	shall not be detectable	Absent (<2)	IS 1622: 1981, RA 2019)

**** End of Report ****

Signatureglobal (India) Ltd

Ajay Kumar Sharma
(Quality Manager)
Authorized Signatory
(Seal & Signature)

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Annexure-XIII

RAINWATER HARVESTING

The storm water collection system for the premises shall be self-sufficient to avoid any collection/stagnation and flooding of water. The amount of storm water run-off depends upon many factors such as intensity and duration of precipitation, characteristics of the tributary area and the time required for such flow to reach the drains. The drains shall be located near the carriageway along either side of the roads. Taking advantage of road camber, the rainfall run off from roads shall flow towards the drains. Storm water from various plots/shall be connected to adjacent drain by a pipe through catch basins. Therefore, it has been calculated to provide 65 rainwater harvesting pits at selected locations, which will catch the maximum run-off from the site.

1) Since the existing topography is congenial to surface disposal, a network of storm water pipe drains is planned adjacent to roads. All building roof water will be brought down through rainwater pipes.
2) Proposed storm water system consists of pipe drain, catch basins and seepage pits at regular intervals for rainwater harvesting and ground water recharging.
3) The peak hourly rainfall of 45 mm/hr shall be considered for designing the storm water drainage system.

Rainwater harvesting has been catered to and designed as per the guideline of CGWA. Peak hourly rainfall has been considered as 45 mm/hr. The recharge pit of 2.5m diameter and 4 m depth is constructed for recharging the water. Inside the recharge pit, a recharge bore is constructed having adequate diameter and depth. The bottom of the recharge structure will be kept 5 m above this level. At the bottom of the recharge well, a filter media is provided to avoid choking of the recharge bore. Design specifications of the rainwater harvesting plan are as follows:

- Catchments/roofs would be accessible for regular cleaning.
- The roof will have a smooth, hard and dense surface which is less likely to be damaged allowing the release of material into the water. Roof painting has been avoided since most paints contain toxic substances and may peel off.
- All gutter ends will be fitted with a wire mesh screen and a first flush device would be installed. Most of the debris carried by the water from the rooftop like leaves, plastic bags and paper pieces will get arrested by the mesh at the terrace outlet and to prevent contamination by ensuring that the runoff from the first 20 minutes of rainfall is flushed off.
- No sewage or wastewater would be admitted into the system.
- No wastewater from areas likely to have oil, grease, or other pollutants has been connected to the system.

Calculations for storm water load:

Green Area = 37,241.664m^2

Paved Area = 1,69,855.489m^2

Mean monthly rainfall for District as per IMD = 45 mm

Run-off from Green area = 105302.64 x 0.045 x 0.20

= 947.72 m^3

Run-off from Paved area = 1, 69,855.489 x 0.045 x 0.70

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= 5,350.447m^3

Total runoff load from green and paved area = 947.72 + 5,350.447**= 6,298.167 m^3**

Taking 20 minutes Retention Time, Total volume of storm water = 6,298.167/3

= 2,099.389 m^3

Taking the effective diameter and depth of a Recharge pit 2.5m and 4 m respectively,

Volume of a single Recharge pit = $\pi r^2 h$ = 3.14 × 1.6× 1.6× 4= 32 m^3

Hence No. of pits required = 2,099.389/32 = 65 pits

A total of 65 no. of pits proposed for artificial ground water recharge.

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