

BEFORE THE NATIONAL GREEN TRIBUNAL  
PRINCIPAL BENCH, NEW DELHI

Original Application No. 444 of 2023

IN THE MATTER OF:

Paryavaran Vikash Sangh

... Applicant

vs.

State of Haryana & Ors.

.. Respondents

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Place: New Delhi

Date: 20.01.2024

Filed By:-



Jitender Chaudhary  
Advocates for the Respondent no.9  
For  
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Advocates and Legal Consultants  
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.. Respondents

**REPLY TO THE JOINT COMMITTEE REPORT ON BEHALF OF THE RESPONDENT N0.09-NEO CENTRA**

Most Respectfully showeth as under: -

1. The present reply on behalf of Respondent no.9-Neo Centra to the Joint Committee Report is in addition to the reply filed to the OA and the contents of the same be read as part and parcel of the present reply and same are not being repeated for sake of brevity.

**REPLY TO THE OBSERVATIONS, PRELIMINARY SURVEY AND INVESTIGATION REPORT AND CONCLUSION**

2. That at the outset it is necessary to set out certain factual aspects as regards to the answering respondent that are relevant for the adjudication of the present OA . It is submitted that the Answering Respondent no.9 is an environmentally conscious, law-abiding company and had in bona fide interest applied for all clearances in accordance with the law and obtained all requisite approvals and permissions. The project of Neo Centra is being developed by M/s Ocimum Estates Pvt Ltd. (" answering respondent no. 9") under license no. 144 of 2014 granted by Director, Town and Country

Planning, Govt. of Haryana ("DTCP") to develop commercial complex at Revenue Estate of Daultabad, Sector 103, District Gurgaon (hereinafter "site"). The answering respondent has a collaboration agreement dated 21.01.2017 with M/s Neo Developers Pvt. Ltd. who has been granted development rights in the commercial project. Pursuant to obtaining the license the answering respondent applied for various permissions to start the construction work at the site i.e. Sector 103, Village Dautlabad, District Gurgaon, Haryana. The answering respondent has obtained permission from Haryana Water Resources Authority for dewatering. The R-9 is not abstracting groundwater for construction purposes and presently as pointed out in the Action Taken Report there is no construction activity taking place at the site. It is submitted that since 3-4 months no construction is taking place at the site. The Haryana Water Resources Authority NOC is with regard to dewatering at the construction site. At present the construction is at ground floor level and the basement has already been constructed. It is submitted that there is no abstraction of groundwater for construction purposes as answering respondent is using treated wastewater for construction purposes pursuant to the permission granted by Administrator, HUDA. The building plans of the answering respondent were approved on NOC granted by HUDA for use of sewage treated water for construction and setting up of a commercial project. Pursuant to the same treated waste water is being sourced through tankers from GMDA sources and used by the answering respondent for construction purposes. The answering respondent is maintaining ledger account of the treated

water sourced for construction purposes and in support of the ledger the R-9 has all the receipts and the copy of the ledger has been annexed to the reply filed by R-9 to the OA and the same maybe referred herein also.

3. In the Action Taken report under the headings of the Observations at Sl No. 2 qua the respondent no. 9 (Page 59 of report) it is submitted that HWRA permission that has been obtained which is valid up to 24.08.2023. Further in the Preliminary Survey and Field Investigation Report and conclusions (Page 62,63,64 of the report) it is mentioned that the renewal of NOC has not been obtained and it recommended sealing of two tubewells established for dewatering purposes as NOC has not been renewed. It is submitted that the R-9 has applied for renewal of the HWRA permission for dewatering and as such it is pending for approval. The R-9 along with the application has submitted the Groundwater Assessment Report for the area. The R-9 has also submitted compliance of conditions of NOC granted by HWRA. The flow meter has been established as per NOC conditions at the site. It is correctly mentioned in the Action Taken Report that the construction is not taking place at the site and as such no dewatering activity is taking place. The R-9 uses Treated Waste Water for construction purposes as per the permission granted by Administrator, HUDA, a copy of the which is annexed to the Action taken report and also annexed to the reply of R-9 to the OA. The treated waste water for construction purposes is sourced from Water Works at Basai, Gurugram operated by the Gurugram Metropolitan Development Authority (GMDA). The R-9

has consumed 360.44 KL of treated waste water for construction purposes. Copy of the Ledger account showing the payment for Treated Wastewater has already been annexed to the Reply of R-9 to the OA and it has receipts of payment for all the entries in the Ledger account and can produce as and when directed and some as sample of receipts issued by GMDA are annexed with the present reply. The R-9 is complying with the conditions of NOC and as the application for renewal of NOC is pending before HWRA, the tubewells at the site should not be sealed. The R-9 has implemented conditions of NOC as prescribed by HWRA and is willing to comply with any directions on the use of water obtained at the time of dewatering (if any). The True copy of the application submitted for renewal to HWRA along with screenshot of its submission is annexed herewith and marked as **Annexure -1 (Colly)**. The true copy of the compliance of NOC conditions report is annexed herewith and marked as **Annexure -2**. The true copy of the receipts of GMDA for payment of Treated Water Water is annexed herewith and marked as **Annexure -3 (Colly)**. The true copy of the photograph of the flow meter is annexed herewith and marked as **Annexure -4**. The true copy of the Hydrological report for Groundwater is annexed herewith and marked as **Annexure -5**.

4. In view of the submission made hereinunder and reply to the OA, the R-9 is a compliant unit and has followed the conditions set out by HWRA at the time of granting permission. The R-9 is having the requisite environmental permissions for undertaking the construction work at the site. The R-9 is not involved in the illegal

abstraction of groundwater and dewatering without permission from the regulatory authorities as is evident from the permissions put on record. The respondent-9 has all the requisite permissions and approvals to carry out the activity of construction which is a Category Orange industry. The answering respondent no.9 has the requisite permission for dewatering. The activity of dewatering if required is to be undertaken by the method of boring and sump as prescribed by the Haryana Water Resources Authority. The answering respondent has obtained permission from Haryana Water Resources Authority for dewatering so the activity is not illegal. The Haryana Water Resources Authority NOC is with regard to dewatering at the construction site and renewal for the same is pending consideration. As is evident from the Action Taken report that there is no illegal borewell at the site. All the compliances are being taken and will be taken up as per the conditions specified in the Consent to establish issued by Haryana State Pollution Control Board and EC granted by State Environment Impact Assessment Authority, Haryana (SEIAA). The IGBC Gold certificate obtained by the answering respondent for undertaking to construction green building lays emphasis upon water conservation measures and a component of it is provision of rainwater harvesting. The answering respondent had submitted rain water harvesting plan which will be implemented as per condition specified at Sl No. (i) of the EC dated 20.08.2018 at the Operational Phase of the project. Further, answering respondent is now mandated as per additional conditions ( Sl. No. 1) specified in Amended EC dated 17.07.2020 to treat sewage as per latest

technology with tertiary technology i.e. Ultra Filtration and the treated effluent from STP will be recycled/reused for flushing, DG cooling and gardening. At present domestic sewage generated at the site is collected in a Septic Tank and the same is carried in tankers for treatment by third party agency and as such no waste water is being discharged on land. In view thereof, no further action is necessitated in the present OA qua the R-9.

Place: New Delhi

Date: 20.01.2024

Filed By:-



Jitender Chaudhary  
Advocates for the Respondent no.9  
For  
Juris Consult  
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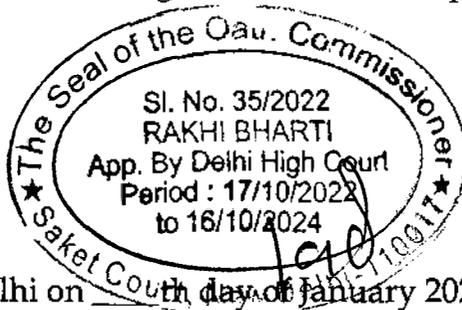
.. Respondents

**AFFIDAVIT OF SERVICE**

I, Manish Bhola Age 43 years S/o Raj Kumar Bhola r/o S-30 Near Shahdara Metro Station New Delhi - 110032 do hereby solemnly affirm and declare as under:

- 1. That I am the authorised signatory of the R-9/ company and as such well competent to swear this affidavit.
- 2. That the accompanying reply on behalf of the respondent no.9 has been drafted by my counsel under my instructions and I understand the same in my vernacular language.
- 3. That annexure are the originals or the true copies of their respective

originals  
I identify the deponents  
who has signed in my presence  
VERIFICATION:



*Manish*  
DEPONENT  
20 JAN 2024

Verified at New Delhi on 20 day of January 2024 that the contents of above affidavit is true and correct to the best of my knowledge and understanding and nothing material has been concealed therefrom.

*Manish*  
DEPONENT

Identified by Smt. Raj Kumar Bhola  
 S/o. W/o. D/o. Shri. Raj Kumar Bhola  
 R/o. S-30 Near Shahdara Metro Station New Delhi  
 identified by Shri. Raj Kumar Bhola  
 has solemnly affirmed before me at New Delhi  
 On 20 that The contents of this affidavit  
 which has been read over & explained to him/are true  
 & correct to his knowledge.

Oath Commissioner, New Delhi

**Government of Haryana**  
**Haryana Water Resources Authority**  
**Application for Permission to Extract Ground Water for Infrastructure Use**

**Application Type - Renewal**

**Application No:** HWRA/INF/R/2023/164 (Application Received Fee Paid)

<b>HWRA/CGWA Previous NOC No:</b> HWRA/NOC/INF/R/2023/10 <a href="#">Download</a>		<b>valid upto : 24/08/2023</b>	
<b>HWRA/CGWA Previous Application No:</b> HWRA/INF/R/2022/16 <a href="#">Download</a>			
<b>1. General Information</b>			
<b>Attach Certificate/NOC regarding 'non-availability' or 'Partial Water supply' in the prescribed format from PHED/ HSVP/ HSIIDC/ MCs &amp; other local Government water supply agencies in respect of all categories of assessments units</b>			<a href="#">Download</a>
(i)	<b>Name of Applicant</b>	Manish Bhola	
(ii)	<b>Designation of Applicant</b>	Authorized Signatory	
	<b>Authorization Letter in the name of Manish Bhola (applicant):</b>	<a href="#">Download</a>	
	<b>ID Proof Type</b>	PAN	
	<b>ID Proof no</b>	AORPB0720R	
	<b>Id Proof Document</b>	<a href="#">Download</a>	
(ii)	<b>Mobile No. of Applicant</b>	9910422299	
(iii)	<b>Email of Applicant</b>	cs@neodevelopers.com,	
(iv)	<b>Name of the Infrastructure:</b>	Neo Centra By Ocimum Estates Pvt Ltd	
	<b>Type of Infrastructure:</b>	Office Building	
	<b>Is Commercial</b>	Yes	
	<b>Completion Certificate</b>	<a href="#">Download</a>	
	<b>DateCompletionCertificate</b>	21/10/2021	
	<b>Occupation Certificate</b>	<a href="#">Download</a>	
	<b>DateOccupationCertificate</b>	21/10/2021	
	<b>Date Of Commencement</b>	21/10/2021	
<b>Approval letter / CLU of State Government Agency approving the infrastructure development to be attached</b>			<a href="#">Download</a>
<b>Latest up-to-date valid Environment Clearance Certificate by SEIIA, if applicable</b>			
	<b>Whether CTO/CTE by HSPCB is applicable</b>	No	
	<b>If not applicable, give reason</b>		
	<b>Latest CTO issued by HSPCB, if applicable</b>		
		<b>CTO/CTE Number :</b>	<b>Issue Date :</b>
	<b>Validity period of uploaded CTO/CTE</b>	<b>From :</b>	<b>To :</b>
(v)	<b>Location details of the Infrastructure unit:</b>		
	<b>Infrastructure Unit Address:</b>	Sector 103,Village Daultabad Tehsil, District Gurugram Haryana	

	<b>State :</b>	Haryana	<b>District :</b>	GURUGRAM	
	<b>Tehsil:</b>	Gurgaon	<b>Block:□</b>	GURGAON	
	<b>Village/MC:</b>	Daultabad	<b>Region:</b>	over-exploited	
	<b>Latitude:</b>	28.499958	<b>Longitude:</b>	76.584282	
	<b>Infrastructure Locality:</b>	Gram Panchayat			
	<b>Site Plan:</b>	<a href="#">Download</a>			
	<b>Location Map:</b>	<a href="#">Download</a>			
	<b>Document of Ownership/Lease:</b>	<a href="#">Download</a>			
(vi)	<b>Correspondence address:</b>	1205 12th floor Tower B Signature Tower south city1			
(vii)	<b>Applying For:</b>	Construction Purpose			
(v)	<b>Purpose of Abstraction</b>	Other Use			
(vi)	<b>Land use details of existing/proposed:</b>				
	<b>Total Land area(sq m):</b>				9333.31
	<b>Rooftop area of buildings/sheds(sq m):</b>				5468.74
	<b>Road/paved area(sq m):</b>				1455.20
	<b>Green belt area(sq m):</b>				1857.33
	<b>Open Land(sq m):</b>				552.03
	<b>Any other structure proposed:</b>	NA			
(vii)	<b>Source of availability of surface water for Industrial use, if any</b>	HUDA			
(viii)	<b>Groundwater utilization for:</b>	New Project			
<b>2. Total number and type of:</b>					
	<b>a. Dwelling units</b>				00
	<b>b. Commercial units</b>				01
	<b>c. Industrial units</b>				00
	<b>d. Others</b>				00
<b>3. Detail of water requirement/ recycled water usage: (Please enclose flow chart of activities and requirement of water at each stage):</b>					
<b>Water Requirement for construction purpose :</b>					
	a) Quantity of water required for construction				0.00
	b) Period of construction for which permission is required (No. Of Days)				0
<b>Water Requirement for operational purpose :</b>					
		<b>Existing as per NOC</b>		<b>Revised</b>	
	<b>Calculation details of water requirement:</b>			<a href="#">Download</a>	
	<b>Water Balance Chart</b>			<a href="#">Download</a>	
(i)	<b>Total water requirement, excluding construction (m3/day):</b>	0.00		0.00	
(a)	<b>Ground Water requirement, excluding construction (m3/day):</b>	0.00		0.00	

(b)	<b>Recycled Water usage (m3/day):</b>		0.00	0.00		
(c)	<b>Proposed/existing water supply from any agency (m3/day):</b>		0.00	0.00		
(ii)	<b>Breakup of water requirement and usage:</b>					
	<b>Activity</b>	<b>Existing requirement (m3/day)</b>	<b>Proposed requirement (m3/day)</b>	<b>Total requirement (m3/day)</b>	<b>No. of operational days in a year</b>	<b>Annual requirement (m3/year)</b>
	Residential/ domestic	0.00	0.00	0.00	0	0.00
	Commercial activity	0.00	0.00	0.00	0	0.00
	Greenbelt development	0.00	0.00	0.00	0	0.00
	Industrial activity	0.00	0.00	0.00	0	0.00
	Other use	0.00	0.00	0.00	0	0.00
	<b>Grand total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>		<b>0.00</b>
(iii)	<b>Quality of Grounwater</b>		Saline Water			
	<b>Test report of groundwater qualityof existibg abstraction structure from NABL accredited lab</b>		<a href="#">Download</a>			
(iv)	<b>Whether ETP/STP proposed:</b>		Yes			
		<b>m3/day</b>	<b>No. of operational days</b>	<b>m3/year</b>		
	<b>Quantity of treated water available</b>	86.00	0.00	0.0000		
	<b>Reuse In Industrial Activity</b>	0.00	0	0.00		
	<b>Reuse In Commercial Activity</b>	58.00	0	0.00		
	<b>Reuse In Green belt development</b>	3.00	0	0.00		
	<b>Reuse In Other use</b>	25.00	0	0.00		
	<b>Total</b>	<b>86.00</b>	<b>0</b>	<b>0.00</b>		
(v)	<b>Whether project would involve dewatering ground water for excavation for basement construction etc.</b>				Yes	

True Copy

<b>a.)</b>	Whether the groundwater table will be intersected by the activity		
	(a) At what depth (m bgl)	Pre-monsoon	Post-monsoon
	Minimum	1.80	1.80
	Maximum	1.00	1.00
	(b) Maximum depth proposed to dewater (m bgl)	3.00	3.80
	(c) Groundwater flow direction (attach map)	<a href="#">Download</a>	<a href="#">Download</a>
	(d) Any Other information		
<b>b.)</b>	Quantum of ground water proposed to be pumped out	M3/day	M3/year
		120.00	23336.50
	a. Type of structure required for pumping out ground water	01	
	b. Number of pumps proposed to installed	7	
	c. HP of the pumps	3.50	
	d. Operational hours/day	8	
	e. Operational days/year	195	
<b>c.)</b>	Proposed utilization of pumped water	<a href="#">Download</a>	
	a. Water Supply	0.00	
	b. Agriculture	0.00	
	c. Green belt development	0.00	
	d. Suppression of dust	20.00	
	e. Recharge	0.00	
	f. Any other item	100.00	

#### 4. Details of existing and/ or proposed groundwater abstraction structures

	<b>Source of fresh water requirement being met uptill now</b>	
	<b>Affidavite duly attested by the Applicant regarding non-existance of tubewell</b>	
	<b>Likely date of operation of proposed tubewell</b>	
	<b>Quantum of ground water recharge(m3/year)</b>	0.00
a)	<b>Compliance Report of current NOC conditions as per format (In case of NOC issued by HWRA, fill the compliance status against the link on the portal. Take the print out of Compliance Report so generated and attach here duly signed by the applicant)</b>	<a href="#">Download</a> <a href="#">View Online compliance Report</a>
b)	<b>Affidvite for compliance of current NOC conditions, as per format</b>	<a href="#">Download</a>

c)	Self water-audit report for ground water use of 100-500 KLD / water-audit report from accredited consultant for ground water use of above 500 KLD.	<a href="#">Download</a>
d)	Any Other document (if any)	
	i.	
	ii.	
	iii.	
e)	In cases where dewatering is involved, submission of impact assessment report prepared by an accredited consultant on the ground water situation in the area giving detailed plan of pumping, proposed usage of pumped water and comprehensive impact assessment of the same on the ground water regime shall be mandatory. The report should highlight environmental risks and proposed management strategies to overcome any significant environmental issues such as ground water level decline, land subsidence etc.	<a href="#">Download</a>
f)	Certificate from a local government water supply agency regarding non availability of treated sewage water for construction within 10 km. radius of the site in critical and over-exploited areas.	<a href="#">Download</a>

**Self Declaration:-**

1. I hereby declare that all the documents prescribed in the application form have been uploaded and no blank / another / irrelevant documents have been uploaded against specified documents. I am also aware that any false/ wrong submission /uploading of document will lead to rejection of my application without any notice.

2. I hereby certify that the contents of the above Application are true to the best of my knowledge and belief and that it conceals nothing and that no part of it is false. I understand that if any information furnished by me is found to be false, Haryana Ground Water Authority can take punitive action against me as per the extant rules. Further, I shall comply with all the terms and conditions of the permission/NOC to be granted by HWRA.

Date:

Place:

[Download](#)

Signature of Applicant with Office Seal

(Manish Bhola)

(Authorized Signatory)

<b>a) Information of payment for Application Fee</b>				
Type of Organisation	Others			
Total Amount				
Mode of Payment	Online			
<b>Reference No.</b>	<b>Transaction No.</b>	<b>Date</b>	<b>Amount</b>	<b>Status</b>
HRWA1003060416455522	YHDF2085609922	22/09/2023	150000	success
<b>b) Information of payment for Tarrif Fee</b>				
Type of Organisation	Others			
Total Amount				
Mode of Payment				

True Copy

Seal

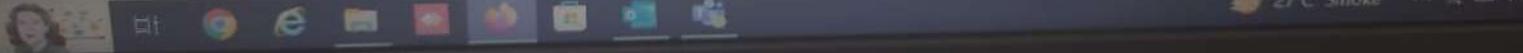
(Manish Bhole)  
(Authorized Signatory)

**a) Information of payment for Application Fee**

Type of Organisation	Others			
Total Amount				
Mode of Payment	Online			
<b>Reference No.</b>	<b>Transaction No.</b>	<b>Date</b>	<b>Amount</b>	<b>Status</b>
HRWA1003060416455522	YHDF2085609922	22/09/2023	150000	success

**b) Information of payment for Tarrif Fee**

Type of Organisation	Others			
Total Amount				
Mode of Payment				



True Copy

**AUTHORIZATION LETTER****AUTHORIZATION TO REPRESENT THE COMPANY IN MATTERS RELATED TO THE HARYANA WATER RESOURCES AUTHORITY**

We, M/s. Ocimum Estates Pvt. Ltd, do hereby authorize Mr. Manish Bhola to represent the Company or act on behalf of the Company before The Haryana Water Resources Authority in matters related to, but not limited to the process of application for Permission to extract Ground Water for Drinking/Domestic Use.

The above- mentioned official be and is hereby authorized to represent the Company and to take actions as may be necessary for the said application/ registration including, but not limited to file, sign, execute and present documents/ records, etc., on behalf of the Company and do all such things as may be required necessary, expedient or desirable for giving effect to the fulfillment of the said purpose.

It is pertinent to mention here that any/ all acts, deeds, things, matters, etc. as aforesaid shall be deemed to be valid and enforceable only if they are consistent as may be relevant for the cause for which this authority letter is issued and the Company shall not be responsible for any acts beyond the scope of the aforesaid powers done by Mr. Manish Bhola and such invalid and illegal acts, and acts done beyond the scope of powers granted in this authority letter shall not bind the Company against any third party/parties or before any authorities in any manner and the Company shall not be answerable in that belief.

**For Ocimum Estates Private Limited**



**Harsh Chaudhary**

**Director**

**DIN: 02720055**

**DATE: 14.09.2023**

True Copy

**OCIMUM ESTATES PRIVATE LIMITED**

CIN : U70100DL2011PTC223201

**Regd. Office:** 296, Forest Lane, Neb Sarai, Sainik Farms, New Delhi, Delhi-110068

**Corp. Office:** 1205, 12<sup>th</sup> Floor, Tower B, Signature Towers, Gurugram-122001, HR



**572**

**Indian-Non Judicial Stamp  
Haryana Government**

Affidavit Date : 14/09/2023

Certificate No. G0N2023I845  Stamp Duty Paid : ₹ 101  
(Rs. Only)

GRN No. 107087475  Penalty : ₹ 0  
(Rs. Zero Only)

**Deponent**

Name : Ocimum Estates PvtLtd  
H.No/Floor : 1204/1205 Sector/Ward : 30 Landmark : 12th floor tower b signature towers  
City/Village : Gurugram District : Gurugram State : Haryana  
Phone : 98\*\*\*\*\*71



Purpose : Affidavit to be submitted at Concerned office

The authenticity of this document can be verified by scanning this QrCode Through smart phone or on the website <https://egrashry.nic.in>

### AFFIDAVIT

I, Manish Bhola, son of shri Raj Kumar Bhola aged about 42 years, authorized representative of M/s Ocimum Estates (P) Ltd ("the company") having a registered office at 296, Forest Lane, Neb Sarai, Sainik Farms, New Delhi-110068, hereby solemnly affirm and declare that Company is complying with the conditions mentioned in the NOC issued by HWRA vide No. HWRA/NOC/INF/R/2023/10 dated 10.02.2023 as under:

1. The Company has not abstracted the Quantum of groundwater mentioned in the NOC for the period from 10.02.2023 to 24.08.2023.
2. The Company has constructed NIL (No./ Nos.) groundwater dewatering structures/dewatering structures NIL (No./ Nos.) as per NOC. The Company has not constructed any additional groundwater abstraction/dewatering structure/ structure(s) for this purpose as per the NOC condition.
3. The Company has installed digital water flow meters in all the groundwater abstraction structure/ structure(s) as mentioned in the NOC. All the flow meter /meter(s) are functional.
4. The Company has implemented rain water harvesting/ recharge measures within the premises as per the condition mentioned in the NOC. The Company also carries out periodic maintenance of recharge structure/ structure(s).
5. In case of saline groundwater abstraction, the Company has sealed existing tube-well yielding freshwater and new well has been constructed tapping saline water zone as per NOC condition.
6. The Company has re-used 100% for non-potable usage of self-generated waste water after due treatment. He shall also ensure to reuse for non-potable usage the Treated Waste Water (other than self-Generated) as per application and registration terms and conditions.



True Copy

7. The Company has taken all preventive measures to prevent contamination of groundwater within the premises.
8. The Company has complied to all the conditions including any other mentioned in the NOC.
9. In case of non-submission of data regarding compliance on HWRA portal, the same shall be submitted by the applicant on HWRA portal within one month failing which NOC shall be liable to be withdrawn.

I hereby undertake that all the information furnished above is true to the best of my knowledge and belief. I am fully aware that if any information submitted by me is found to be false or violation of NOC conditions is observed at any stage, the Company shall be liable to pay Environmental Compensation for illegal withdrawal of ground water /Penalty, as per the relevant provision of HWRA as and when decided by the Statutory Authorities.



DEPONENT

Place:

Date:

**FORMAT FOR COMPLIANCE OF CONDITIONS OF NOC CONDITIONS BY INDUSTRIES/INFRASTRUCTURE/ MINING PROJECTS**

1. Name of industry/infrastructure/ mining project : Neo Centra By Ocimum Estates Pvt Ltd
2. Village/ Block/ District/State : Sector-103, Village – Daultabad, District- Gurugram, Haryana
3. No. & Date of issuance of NOC :HWRA/NOC/INF/N/2022/27 dated 27.01.2022
4. Date upto which NOC was/is valid : 10.08.2022
5. Date of latest renewal (if any) :10.02.2023
6. Date upto which latest renewal is valid :24.08.2023
7. Monitoring of compliance of conditions laid down in the NOC:

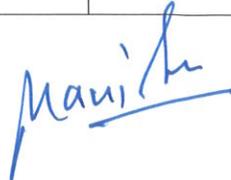
S.No.	Conditions as per NOC		Compliance status	Remarks
1a	Quantum of ground water withdrawal through abstraction structure	NIL m <sup>3</sup> /day	Quantum withdrawn by the applicant (As per log book/Flowmeter record)	NIL m <sup>3</sup> /day
		NIL m <sup>3</sup> /year		NIL m <sup>3</sup> /year
1b	No. of abstraction structures/tube-wells DW/TWs/BWs	NIL nos	No. of abstraction structures/tube-wells DW/ TWs/BWs Existing	NIL nos
1c	Wells fitted with digital water flow meter	All wells to be fitted with flow meters		
1d	Functional status of flow meter	All flow meters should be functional		
2a*	Quantum of Dewatering of Ground water	120 m <sup>3</sup> /day	Quantum of dewatering withdrawn by the Company ( As per logbook)	NIL m <sup>3</sup> /day
2b*	No. of Mine pits/sump/de- watering structure	NA	No. of Mine pits/sump/de- watering structure constructed	NA
2c*	Dewatering structures fitted with digital water flow meter	All Dewatering structures to be fitted with digital water flow meters	Complied	
3	Submission of data on GW extraction/ dewatering to HWRA	GW extraction/ dewatering data to be submitted to HWRA	Whether ground water extraction/ dewatering data submitted to HWRA	No groundwater from site has been dewatered
4a	No. of piezometers to be constructed	_____	No. of piezometers constructed	02 nos.
4b	a) No. of piezometers to be fitted with AWLR/DWLR	a) _____	a) No. of piezometers fitted with AWLR/DWLR	a) 02
	b) No. of Piezometers to be fitted with telemetry	b) _____	b) No. of piezometers fitted with Telemetry	b) NIL

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4c	Submission of water level data to HWRA	Monthly WL data to be submitted to HWRA	Whether monthly water level data submitted to HWRA	
5	Monitoring of GW quality	GW quality to be monitored (once in a year)	Quality data submitted with application	Yes
6a	Annual quantum of water to be harvested/ recharged	NIL m <sup>3</sup> /annum	Quantum of water harvesting/ recharged as implemented by the applicant.	NIL m <sup>3</sup> /annum
6b			No. and type of Recharge structures implemented inside the premises ( <b>Attach photographs</b> )	NA
			Quantity of water Recharged through structures implemented inside the premises	NIL m <sup>3</sup> /annum
			Whether structures are maintained properly as per maintenance schedule	NA
6c			No. and type of structures implemented outside the premises ( <b>Attach photographs</b> )	
			Locations of structures	
			Quantity of water recharged through structures implemented outside the premises	m <sup>3</sup> /annum
			Whether All the structures are maintained properly	Yes/ No
7	Recycling/ reuse of water as per the application	NIL m <sup>3</sup> /day	Quantity of water recycled/reused water	NIL m <sup>3</sup> /day
		NIL m <sup>3</sup> /day		NIL m <sup>3</sup> /day
			STP/ETP installed ( <b>Attach photographs</b> )	NA
8*	Water from dewatering in mining/ infrastructure projects to be put to gainful use	As per application	Activity for which water from dewatering project is being used	Pumped water will be disposed off through private water tanker in Najafgarh drain which is at approx. 1.96 Km away from the project site in west direction
9	Latest water efficient technology to be implemented to reduce dependence on groundwater resources by 20% in three years as per application		Detail of Water Efficient technology implemented along with proof	NA
10	Any other condition as per the requirement of NOC			

\*Applicable for Mining/Infrastructural dewatering projects only.

  
Name & signature of Project proponent/  
Representative of the Company

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Or

Transaction Id : GMDABWT266751681105121116

Tanker size: Upto 5000 Ltrs. Charges: Rs. 400/-

Withdrawal slip 1 of 1

Type - Potable/Drinking Water

Water Station - Water Works Basai

Valid From - Mon, 10 Apr 2023

Valid Till - Fri, 14 Apr 2023

File Id - BWT-1681104866686

Name - OCIMUM ESTATES PVT LTD

Site/Project Name - NEO CENTRA

Site/Project Address - SECTOR-103,VILL DAULTABAD GURGAON

*Deek*  
10-4-23

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Transaction Id : GMDABWT862591681104860779

Tanker size: Upto 10000 Ltrs. Charges: Rs. 800/-

Withdrawal slip: 1 of 1

Type - Potable/Drinking Water

Water Station - Water Works Basai

Valid From - Mon, 10 Apr 2023

Valid Till - Fri, 14 Apr 2023

File Id - BWT-1681104195011

Name - OCIMUM ESTATES PVT LTD

Site/Project Name - NEO CENTRA

Site/Project Address - SECTOR-103,VILL DAULTABAD GURGAON

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Or

Transaction Id : GMDABWT759891681301988989

Tanker size: Upto 10000 Ltrs. Charges: Rs. 800/-

Withdrawal slip 1 of 1

Type - Potable/Drinking Water

Water Station - Water Works Basai

Valid From - Wed, 12 Apr 2023

Valid Till - Sun, 16 Apr 2023

File Id - BWT-1681301731532

Name - OCIMUM ESTATES PVT LTD

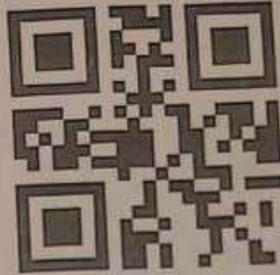
Site/Project Name - NEO CENTRA

Site/Project Address - SECTOR-103,VILL DAULTABAD GURGAON

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12-4-23

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Or

Transaction Id : GMDABWT917101681801746896

Tanker size: Upto 10000 Ltrs. Charges: Rs. 800/-

Withdrawal slip 1 of 1

Type - Potable/Drinking Water

Water Station - Water Works Basai

Valid From - Tue, 18 Apr 2023

Valid Till - Sat, 22 Apr 2023

File Id - BWT-1681801521076

Name - OCIMUM ESTATES PVT LTD

Site/Project Name - NEO CENTRA

Site/Project Address - SECTOR-103, VILL DAULTABAD GURGAON

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T-812  
①

Or

Transaction Id : GMDABWT467901681455787859

Tanker size: Upto 10000 Ltrs. Charges: Rs. 800/-

Withdrawal slip 1 of 1

Type - Potable/Drinking Water

Water Station - Water Works Basai

Valid From - Fri, 14 Apr 2023

Valid Till - Tue, 18 Apr 2023

File Id - BWT-1681455432574

Name - GCIMUM ESTATES PVT LTD

Site/Project Name - NEO CENTRA

Site/Project Address - SECTOR-103, VILL DAULTABAD GURGAON

Dooh  
14-4-23

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Or

Transaction Id : GMDABWT159681684142223344

Tanker size: Upto 10000 Ltrs. Charges: Rs. 800/-

Withdrawal slip 1 of 1

Type - Potable/Drinking Water

Water Station - Water Works Basai

Valid From - Mon, 15 May 2023

Valid Till - Fri, 19 May 2023

File Id - BWT-1684142051692

Name - OCIMUM ESTATES PVT LTD

Site/Project Name - NEO CENTRA

Site/Project Address - SECTOR-103,VILL DAULTABAD GURGAON

*Deek*

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T-812

Or

Transaction Id : GMDABWT559101681972688060

Tanker size: Upto 10000 Ltrs. Charges: Rs. 800/-

Withdrawal slip 2 of 2

Type - Potable/Drinking Water

Water Station - Water Works Basai

Valid From - Thu, 20 Apr 2023

Valid Till - Mon, 24 Apr 2023

File Id - BWT-1681972584563

Name - OCIMUM ESTATES PVT LTD

Site/Project Name - NEO CENTRA

Site/Project Address - SECTOR-103,VILL DAULTABAD GURGAON

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Or

Transaction Id : GMDABWT198131684498653117

Tanker size: Upto 10000 Ltrs. Charges: Rs. 800/-

Withdrawal slip 2 of 2

Type - Potable/Drinking Water

Water Station - Water Works Basai

Valid From - Fri, 19 May 2023

Valid Till - Tue, 23 May 2023

File Id - BWT-1684497061376

Name - OCIMUM ESTATES PVT LTD

Site/Project Name - NEO CENTRA

Site/Project Address - SECTOR-103,VILL DAULTABAD GURGAON

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Or

Transaction Id : GMDABWT330901684844815976

Tanker size: Upto 10000 Ltrs. Charges: Rs. 800/-

Withdrawal slip 1 of 1

Type - Potable/Drinking Water

Water Station - Water Works Basai

Valid From - Tue, 23 May 2023

Valid Till - Sat, 27 May 2023

File Id - BWT-1684844455468

Name - OCIMUM ESTATES PVT LTD

Site/Project Name - NEO CENTRA

Site/Project Address - SECTOR-103,VILL DAULTABAD GURGAON

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Show below QR Code to the operator. Do not share this with anyone else.



Or

Transaction Id : GMDABWT219181684498653103

Tanker size: Upto 10000 Ltrs. Charges: Rs. 800/-

Withdrawal slip 1 of 2

Type - Potable/Drinking Water

Water Station - Water Works Basai

Valid From - Fri, 19 May 2023

Valid Till - Tue, 23 May 2023

File Id - BWT-1684497061376

Name - OCIMUM ESTATES PVT LTD

Site/Project Name - NEO CENTRA

Site/Project Address - SECTOR-103, VILL DAULTABAD GURGAON

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Show below QR Code to the operator. Do not share this with anyone else:



Or

Transaction Id : GMDABWT114591686897916109

Tanker size: Upto 10000 Ltrs. Charges: Rs. 800/-

Withdrawal siip 1 of 1

Type - Potable/Drinking Water

Water Station - Water Works Basai

Valid From - Fri, 16 Jun 2023

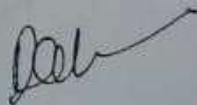
Valid Till - Tue, 20 Jun 2023

File Id - BWT-1686896910531

Name - OCIMUM ESTATES PVT LTD

Site/Project Name - NEO CENTRA

Site/Project Address - SECTOR-103,VILL DAULTABAD GURGAON



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Or

Transaction Id : GMDABWT742061687264105683

Tanker size: Upto 10000 Ltrs. Charges: Rs. 800/-

Withdrawal slip 1 of 2

Type - Potable/Drinking Water

Water Station - Water Works Basai

Valid From - Tue, 20 Jun 2023

Valid Till - Sat, 24 Jun 2023

File Id - BWT-1687263905039

Name - OCIMUM ESTATES PVT LTD

Site/Project Name - NEO CENTRA

Site/Project Address - SECTOR-103, VILL DAULTABAD GURGAON

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Show below QR Code to the operator. Do not share this with anyone else.



Or

Transaction Id : GMDABWT691841685962127938

Tanker size: Upto 10000 Ltrs. Charges: Rs. 800/-

Withdrawal slip 1 of 1

Type - Potable/Drinking Water

Water Station - Water Works Basai

Valid From - Mon, 5 Jun 2023

Valid Till - Fri, 9 Jun 2023

File Id - BWT-1685961954002

Name - OCIMUM ESTATES PVT LTD

Site/Project Name - NEO CENTRA

Site/Project Address - SECTOR-103,VILL DAULTABAD GURGAON

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Show below QR Code to the operator. Do not share this with anyone else.



Or

Transaction Id : GMDABWT494141689854737387

Tanker size: Upto 10000 Ltrs. Charges: Rs. 800/-

Withdrawal slip 1 of 2

Type - Potable/Drinking Water

Water Station - Water Works Basai

Valid From - Thu, 20 Jul 2023

Valid Till - Mon, 24 Jul 2023

File Id - BWT-1689854554212

Name - OCIMUM ESTATES PVT LTD

Site/Project Name - NEO CENTRA

Site/Project Address - SECTOR-103,VILL DAULTABAD GURGAON

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Show below QR Code to the operator. Do not share this with anyone else.



Or

Transaction Id : GMDABWT181231689854737401

Tanker size: Upto 10000 Ltrs. Charges: Rs. 800/-

Withdrawal slip 2 of 2

Type - Potable/Drinking Water

Water Station - Water Works Basai

Valid From - Thu, 20 Jul 2023

Valid Till - Mon, 24 Jul 2023

File Id - BWT-1689854554212

Name - OCIMUM ESTATES PVT LTD

Site/Project Name - NEO CENTRA

Site/Project Address - SECTOR-103,VILL DAULTABAD GURGAON

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Or

Transaction Id : GMDABWT397111687264105704

Tanker size: Upto 10000 Ltrs. Charges: Rs. 800/-

Withdrawal slip 2 of 2

Type - Potable/Drinking Water

Water Station - Water Works Basai

Valid From - Tue, 20 Jun 2023

Valid Till - Sat, 24 Jun 2023

File Id - BWT-1687263905039

Name - OCIMUM ESTATES PVT LTD

Site/Project Name - NEO CENTRA

Site/Project Address - SECTOR-103,VILL DAULTABAD GURGAON

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 **GPS Map Camera****Sohna Rural, Haryana, India****73JH+RX, Sohna Rural, Haryana 122102, India****Lat 28.28115°****Long 77.080554°****06/12/23 04:15 PM GMT +05:30****Google**

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## Hydro geological and Hydrology Groundwater report of Ocimum Estates

### 1. Introduction:

Water resource is one of the most vital natural wealth of the Earth and it has been playing a controlling role in development and dawn of the civilizations.

The subsurface manifestation of water is termed as "groundwater" which acts as a supplement to surface water. Hence, it is becoming essential to develop groundwater resources to cater the demand of water supply which is being accelerated due to rapid growth of human population, urbanization and industrialization.

The site is represented with polygon (Fig.1) with Latitude  $28^{\circ}30'0.13''N$  and Longitude  $76^{\circ}58'42.82''E$ , Sector 103, Gurugram, Haryana 122006.

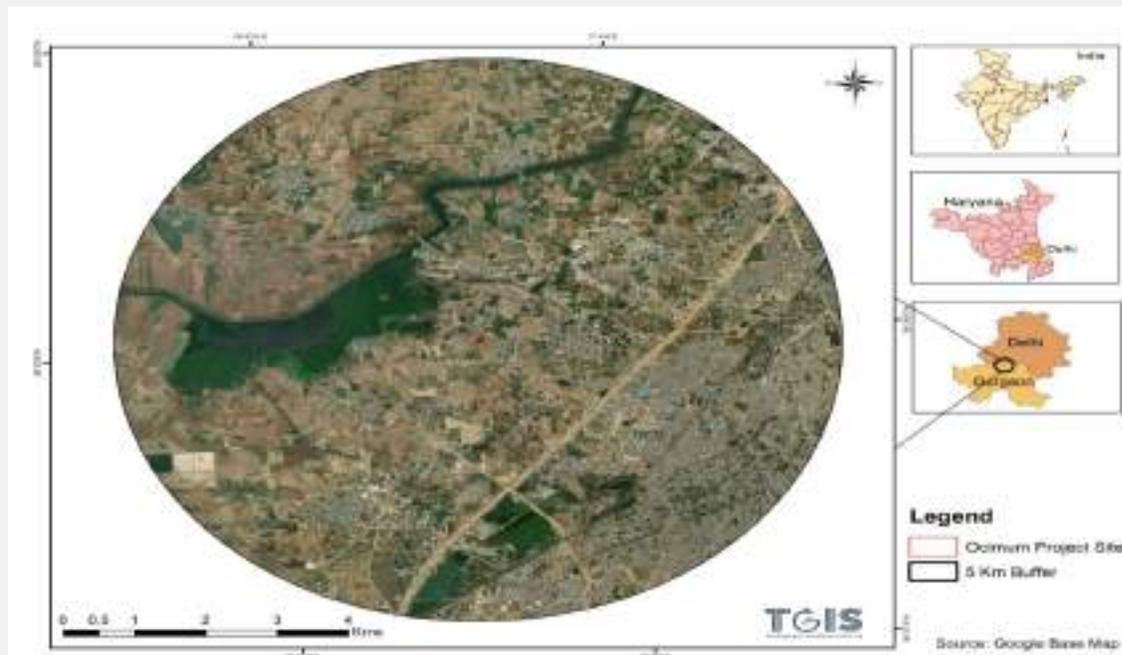


Fig. 1. Site details of Ocimum Estates

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### 1.1 Hydrometeorology

The climate of the district can be classified as tropical ,semi-arid and hot which is mainly characterized by the extreme dryness of the air except during monsoon months, intensely hot summers and cold winters. During three months of south west monsoon from last week of June to September, the moist air of penetrate into the region and causes high humidity, cloudiness and monsoon rainfall. The period from October to December constitutes post monsoon season. The cold weather season prevails from January to the March and followed by the hot weather or summer season which prevails upto the last week of June.

### 1.2 Rainfall

The normal annual rainfall in Gurugram district is about 618 mm (Indian Metrological Department) spread over 28 days. The south west monsoon sets in the last week of June and withdraws towards the end of September and contributes about 85% of the annual rainfall. July and August are the wettest months. 15% of the annual rainfall occurs during the non-monsoon months in the wake of thunder storms and western disturbances.

### 1.3 Geomorphology and soil types

The area has conspicuously flat topography, however, in the south west part small isolated hillocks of Precambrian rocks are exposed. The alluvial plain is formed by the Sahibi river which is tributary of River Yamuna. Soils of the Gurugram district are classified as tropical and brown soils, 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 soils are medium textured loamy sand is the average texture in Ocimum Estates (Fig. 2) and organic contents (soil organic matter) (CGWC 2018) is 0.2 to 0.40 percent and falls in low category.

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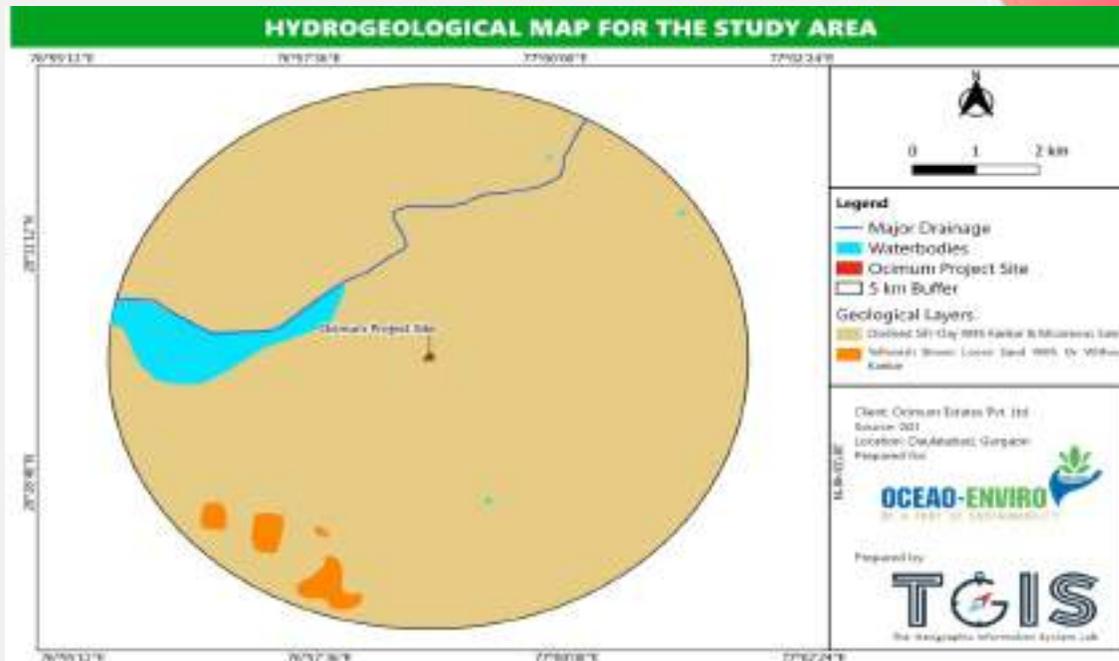


Fig. 2. Hydrogeology and soil details at study area

### 1.3 Evaporation:

The evaporation variations are correlated with the variations of temperature. The evaporation is maximum in the month of May and minimum during the months of December and January. The rate of evaporation in Gururam district is occurs between 340-450 mm/ year (CGWC 2018).

### 1.4 Humidity:

The atmospheric humidity is usually low during summer months which is around 25%. However humidity slowly starts building up from third week of June and it reaches maximum around 70% during monsoon period. The humidity again decreases in winter season and it varies between 32 to 40% during March.

## 2. Hydrogeological mapping

### 2.1 Soils Study

#### 2.1.1 Holambi-Daryapur Association

This association occurs on old alluvial plain little above the meander plain. The soils are characterized by loam to silt loam textures. Daryapur series is calcareous with calcium carbonate of more than 1% within 50 cm depth. The available water capacity is good. Holambi soils are one of the potential soils of the Territory. Daryapur soils are equally good but for the presence of free lime. (Indian Council of Agricultural Research 2009)

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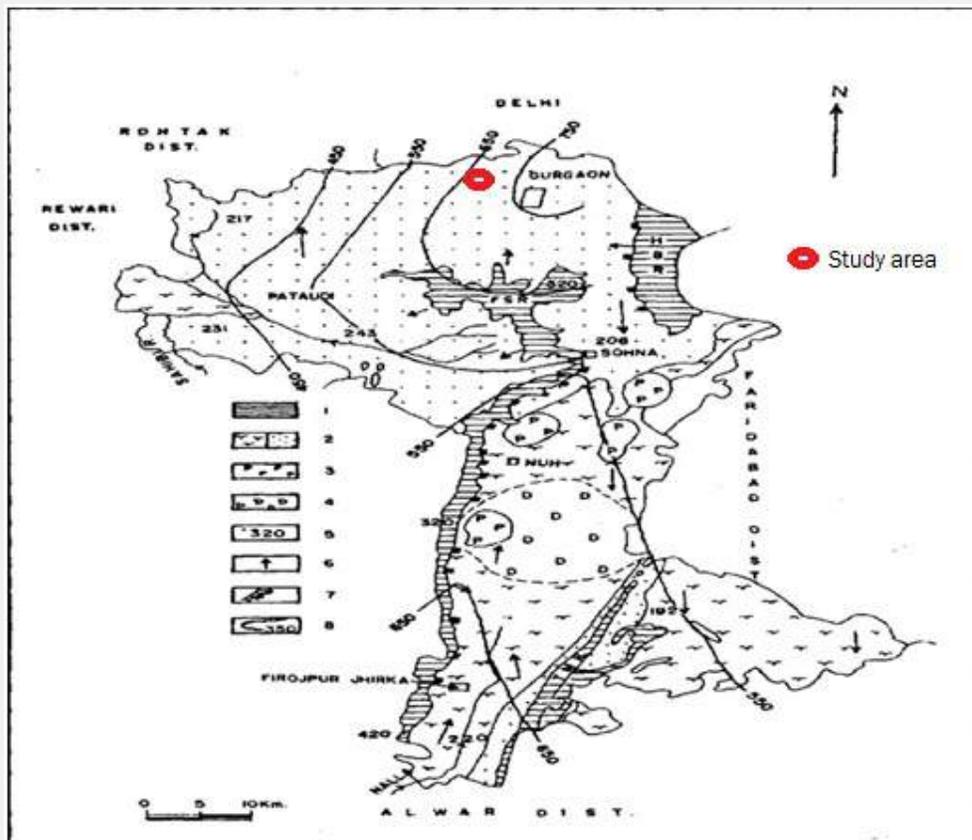


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## 2.2 Hydrogeology:

Ground water in aquifer is based on the type of soil and water percolation. Formation of soil is based on the process of weathering, silting, genesis and fractures. The weathered and pores present in the soil, clay and silt formation provides scope of ground water occurrence, storage and its movement.

In the Gurugram district, ground water occurs under Confined and phreatic or unconfined condition in older alluviums and weathered portion of clay/rocks and semi-confined to confined conditions in clay/cavernous part of rocks i.e. clay, silt and micaceous sand (Central Ground Water Board 2018). By the ground truth studies of the study area. The soil type has content of clay, silt and micaceous sand which lies under Ajabgarh unit and Varanasi order alluvium (GSI 2009).



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(Source - Geological Survey of India)

Fig.3. Geological and geomorphological map of Gurugram district. 1) Ajabgarh Group (Denudational Hill Unit); 2) Varanasi Older Alluvium (Alluvial Plain Unit); 3) Palacotal; 4) Depression; 5) Elevation above m.s.l.; 6) Ground Slope; 7) Escarpment; 8. Isohyte.

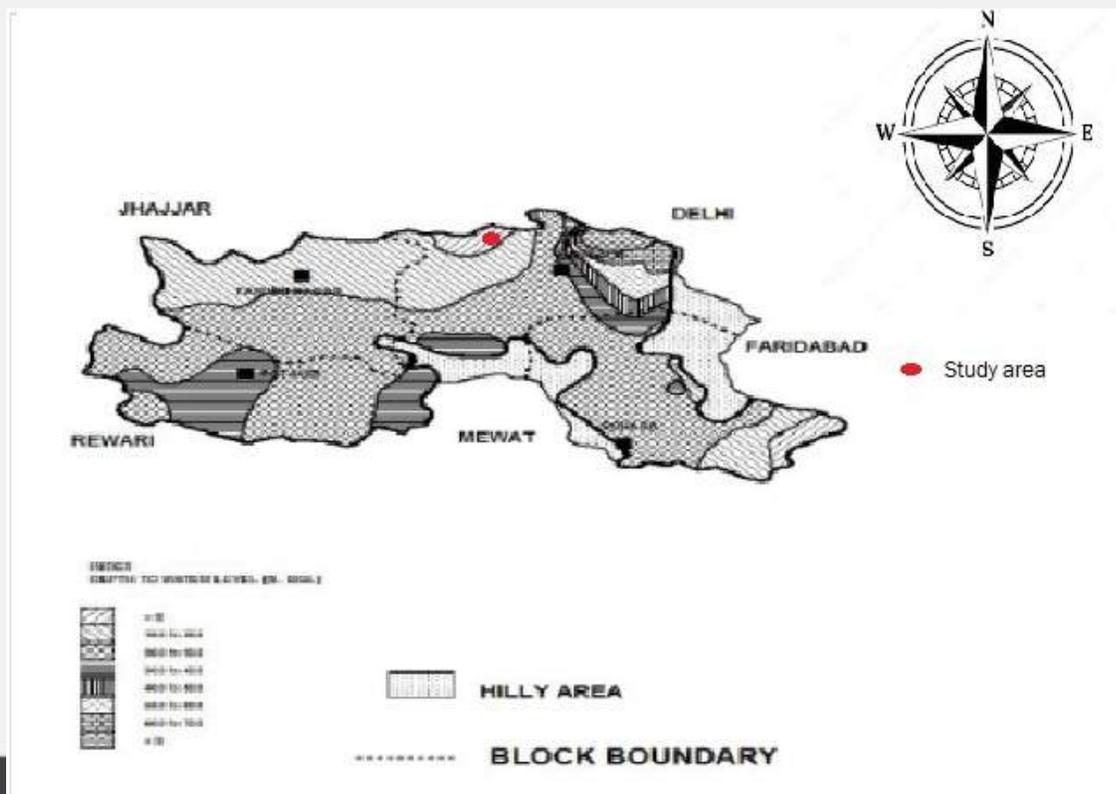




The behaviour of the ground water storage, depth to water levels and fluctuation, the water level monitoring was carried out in the study area by the data taken from a) noting the static level of the water of the study area (Table no. 1) b) CGWB, Digital Elevation Model (DEM) of the study area and incorporating the data in MODFLOW software for simulation covering field studies (Dug Well & Hand pumps) within study area during post-monsoon and the data for pre-monsoon season has been used as per previous study done by CGWB and consultation with nearby people.

Table no. 1 . Ground water level observation

S. No.	Date of Visit	Latitude	Longitude	Dug well/ Bore well	Depth of Water
1.	4/2/2021	28°30'1"	76°58'41"	Dug well	6.3 m
2.	4/2/2021	28°30'0"	76°58'38"	Bore well	8.43 m
3.	4/2/2021	28°29'37"	76°59'38"	Bore well	8.7 m
4.	4/2/2021	28°30'35"	76°59'49"	Bore well	8.3 m
5.	4/2/2021	28°29'29"	76°57'59"	Bore well	8.25 m
6.	4/2/2021	28°29'27"	76°57'57"	Dug well	7.15 m



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Fig 4. Depth of Water level Pre-Monsoon



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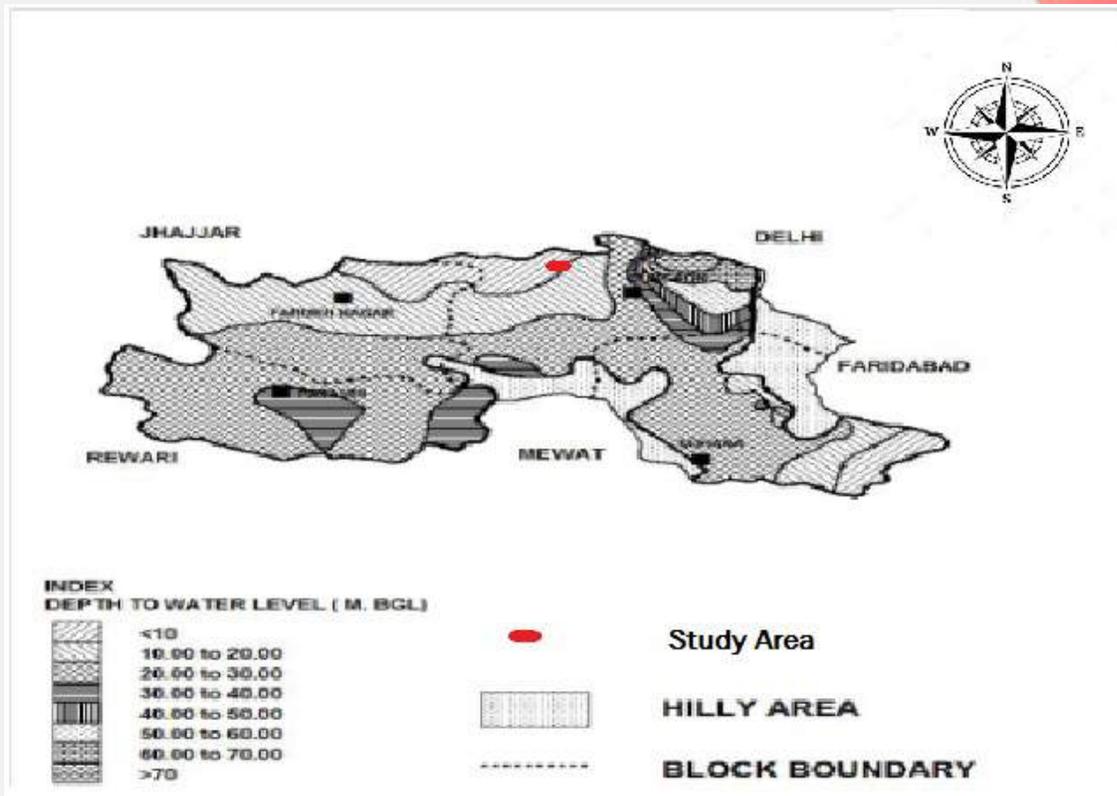


Fig.4. Depth of water level Post-Monsoon (CGWB Report 2018)

### 3. Geological description of study area

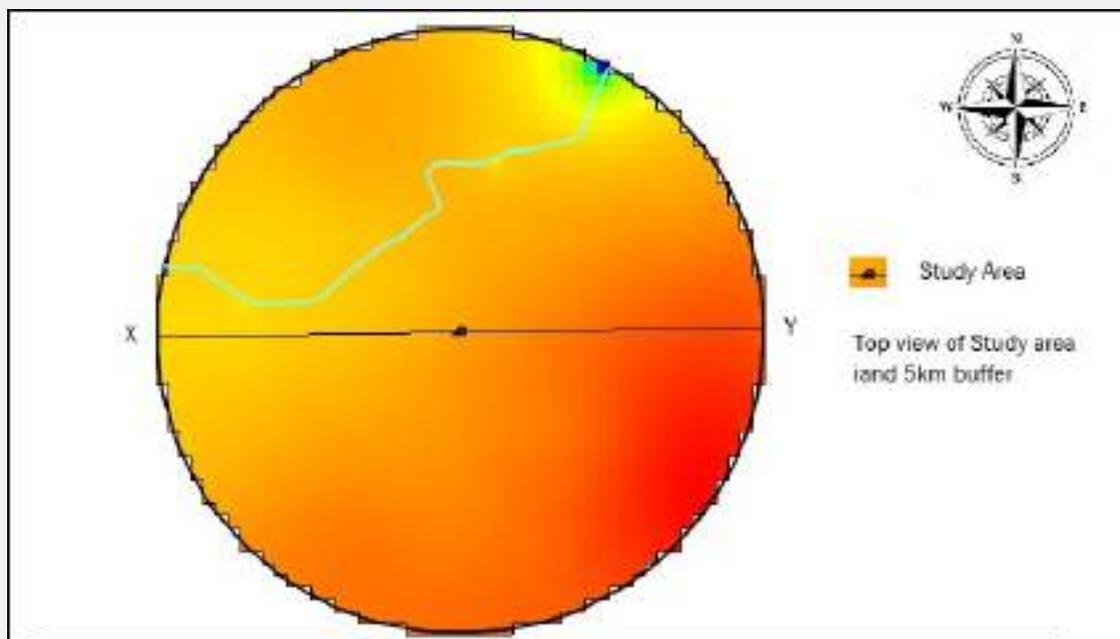


Fig.5 Top view of Study area with 5 Km buffer

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Fig.6. Cross-section of Fig no. 5 (Model output MODFLOW)

### 3.1 Aquifer system and aquifer parameters:

The major part of Gururam district is underlain by Quaternary alluvium consisting of sand, clay and silt. The quartzite ridge trending NNE-SSW is located about 7 km east of town in which ground water occurs in fractures, joints and crevices. Sandy layers at various depth form major water bearing horizons above the crystalline basement. Ground water in the Gururam block occurs in unconfined and semi-confined condition. The upper zone of saturation consists of fine sand with silt varying from place to place. (CGWB 2018) and with the reference of Fig. 3 the study area consist of sand with silt on upper layer and comes under unconfined condition.

### 3.2 Details of aquifer:

The aquifers of the study area occur within an average depth of 6m- 8m from the ground level (MODFLOW Study) (Fig.6) . They are composed of alluvial material. The shallow water table in the aquifer follows regional flow of the ground water movement is generally towards topographic low areas (MODFLOW Output Fig.7). The recharging bodies such as small swamps, Canals (Fig.7) and low lying area where water accumulation takes place during rainy season also influence the occurrence and movement of shallow ground water in aquifers. (DEM and MODFLOW simulation study). The yield of aquifers depends on the regional flow of the area and depth to water levels ranges between 7.0 to 13.00 mbgl (CGWB and MODFLOW) in pre-monsoon period . In general the yield of dug wells ranges from 1500 to 2000 m<sup>3</sup>/day. (CGWB 2018).

Aquifer system in the area in deep water table mainly formed by sand layers and thicker clay layer which act as aquitard also . The aquifers of the area are mostly developed by way of bore wells in the area where depth varies from 40 to 80 m. In general the yield of bore wells ranges from 2 to 5 lps (CGWB 2018).

The aquifer parameters of the study area covered by the older alluviums for aquifer and limestone /Shale for deep aquifer the transmissivity ranges from 700-900 m<sup>2</sup>/day (CGWB 2018) and at favourable places it goes up to 1200 m<sup>2</sup> pumping test is the most accurate, reliable and commonly used method to evaluate the hydraulic parameters of an aquifer, efficiency of well, safer operational rates of pumping and selection of a suitable pump.

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**Table 2. Details of Aquifer**

S. No.	Layer	Soil type	Hydraulic Conductivity (m/day )
1	Layer 1	Alluvial	12-40
2	Layer 2	Marginal Alluvial	6-22
3	Layer 3	Sand and Clay	4-8
4	Layer 4	Hard Rock	0.001

Source : **Central Ground Water Board (CGWB)**

### 3.2.1 Aquifer Group I:

This group extends from the ground surface downwards to different depths to a maximum of 150 mbgl (metres below ground level) and occurs all over the region. This is composed of relatively coarser sediments and is subdivided into two subgroups at places with the occurrence of sub-regional clay. It is underlain by a clayey horizon, 4 to 181 m thick, which appears to be more to less regionally extensive. The group is under unconfined and semi-confined conditions.

### 3.2.2 Aquifer Group II:

This group consists of numerous sand and clay lenses occurring at variable depth ranging from 45 m to 284 mbgl. The sediments of this group are less than coarser and are occasionally mixed with 'kankar'. The ground water occurs under confined to semi-confined conditions. This aquifer group is underlain by another clayey horizon (6 to 221 m thick) which is considerably thick at places and appears to be regionally extensive.

### 3.2.3 Aquifer Group III:

This group comprises of thin sand layers alternating with thicker clay layers occurring at variable depths ranging from 101 to 421 mbgl. The granular material of this group is generally finer in texture; kankar occurs in the southern parts. This aquifer group is underlain by a thick clayey horizon (7 to 100 m) which, in turn, is underlain by another permissible horizon. In this aquifer group, the ground water normally occurs under confined conditions.

### 3.2.4 Aquifer Group IV:

This Aquifer Group occurs between 168 and more than 475 m depth under confined conditions. There is a thick pile of clayey horizon below this group as well, but this aquifer group is not fully investigated.

(Description of the aquifer was taken from CGWB 2018 report incorporating it into MODFLOW Simulation software). True Copy





4. Regional flow

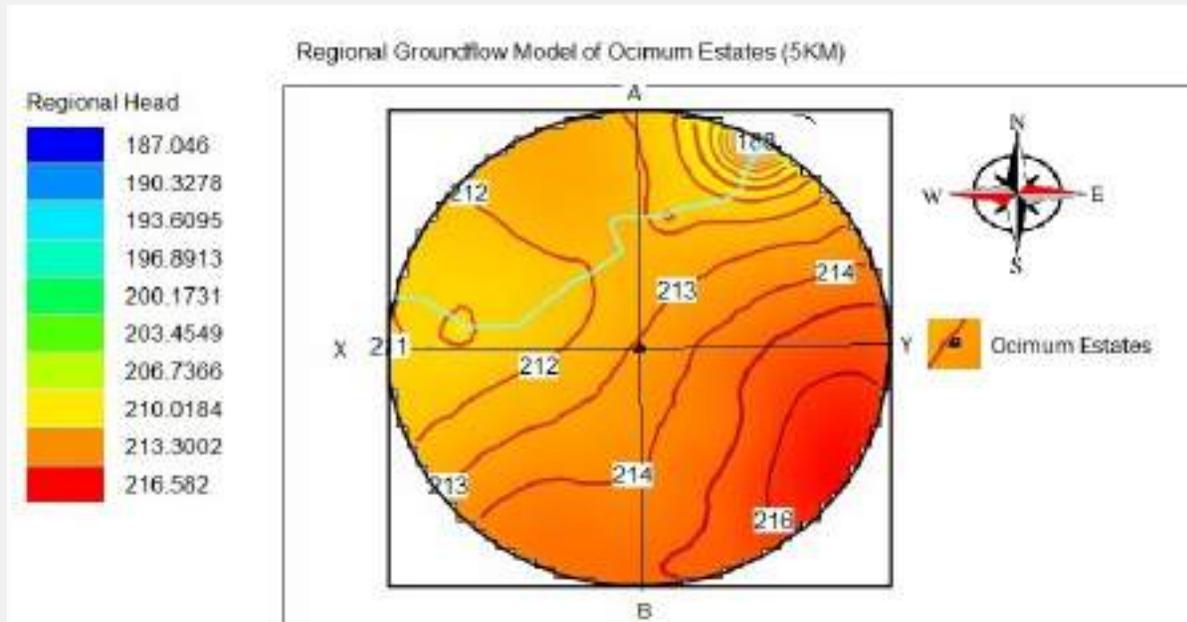


Fig. 7 Regional flow of the area (Source: MODFLOW)

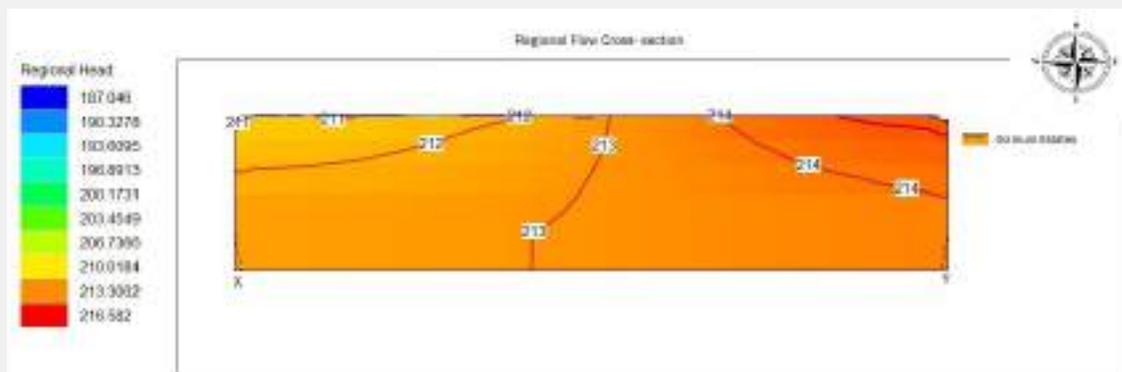


Fig.8 Front cross-section of Ocimum Estates project(MODFLOW Simulation)

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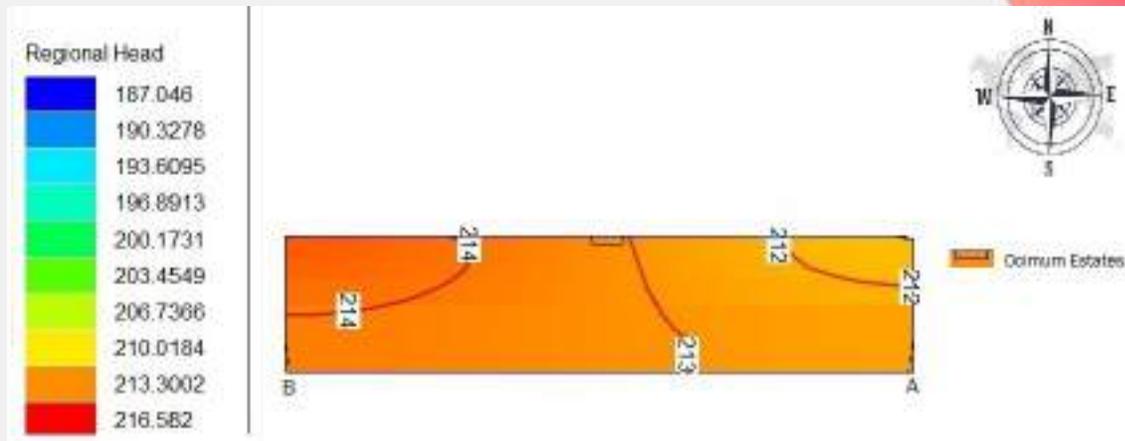


Fig.9 Side Cross-section of the Ocimum Estates project(MODFLOW Simulation)

Regional flow of the study area has been made in MODFLOW software, by adding the DEM and shape file of the study area assimilating the reports of CGWB and field visit studies. The colour legend interprets the simulated contour and head within the study area. Regional head is observed higher in this area because of low lying areas are red in colour and as per the DEM of the 5km buffer zone, considered uneven plane/ agricultural land area with small swamps or low lying areas, act as recharge zone. The blue colour represents drainage (Najafgarh drain) where recharge has been observed in this region the rate of evaporation is very high because of the presence of water body, agricultural land (which can be seen in hydrogeological map) and due to metrological condition. The study area is represented as polygon and outer circle is of 5 km radius from the centre site. By the analysis of the regional flow it has been observed that water in this area is entering from West(W) direction and later on the flow is getting strong due to local area recharge from nearby agricultural field and leaving this area from East(E) direction and average hydraulic gradient of the area ranges between 1.5 to 3.3 m/km for aqueous zones in aquifer I and in aquifer II it varies between 6- 10 m/km. The altitude of water table ranges between 188 to 256 m amsl. (MODFLOW simulation Output).

### 5. Current scenario 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.

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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 operating the pumps of 8 to 15 H.P. Most of the shallow tube wells are either run by diesel engines or electric motors.(Field visit observation) The major part of the district is being irrigated through ground water. The unit draft calculated for irrigation is 1.65 ham (CGWB 2018).

### 5.1 Ground water estimation-water level fluctuation:

The method shows the change in storage of ground water before the monsoon and after monsoon by considering the fluctuations between pre monsoon and post monsoon periods. In this method, the volume of ground water recharge in monsoon season by rainfall which causes the rise in water table is calculated by multiplying the rise in ground water level between pre-monsoon and post-monsoon periods with the specific yield of the aquifer and the area under consideration of assessment which is expressed as follows:

$R = (h \times S_y \times A)$  Where, R = Recharge, h = Rise in water level in monsoon season or the

fluctuation in alluviums plain land h = 1 to 4 m and fluctuation in dissected area is about 0.5- 1 m,  $S_y$  = Specific yield, A = Area for computation of recharge.

The local geology of Ocimum Estates dissected area is Alluvium and coarser sand area which comes under the ajabgarh lithology of Delhi supergroup impure calc-silicate rocks, quartzite. The alluvial has heterogeneity of sand, silt, and calcareous granules. It is known that specific yield values in sedimentary formation ranges from 0.01 to 0.15 and Alluviums ranges from 0.04 to 0.20. Therefore, for our calculation we have assumed a higher value of specific yield, which is 0.20 for the area of Alluviums.

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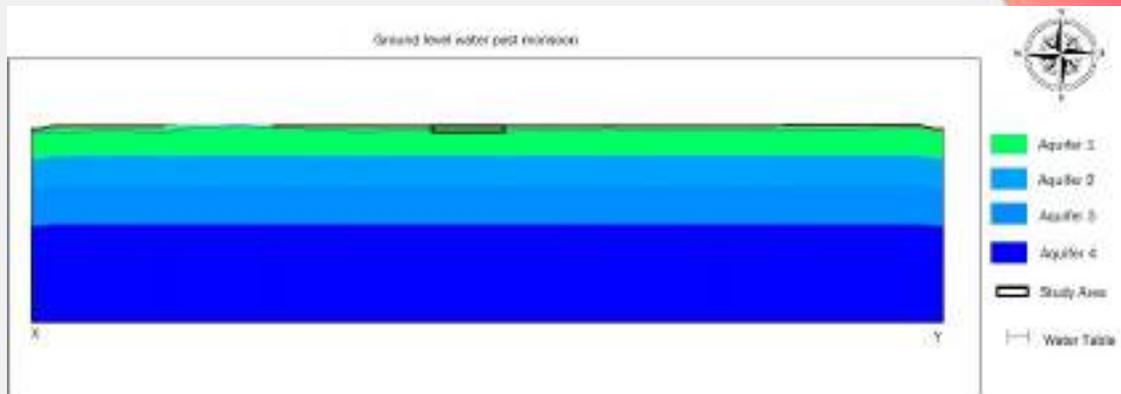


Fig.11 Ground Water level post-monsoon (MODFLOW output)

In the fig.12 the pre-monsoon ground water in the selected area varies between 6.3 mbgl to 7.8 mbgl and after monsoon (post Monsoon) season the water is ranging between 5.8mbgl to 6.6mbgl across the dissected area in the radius of 5km.

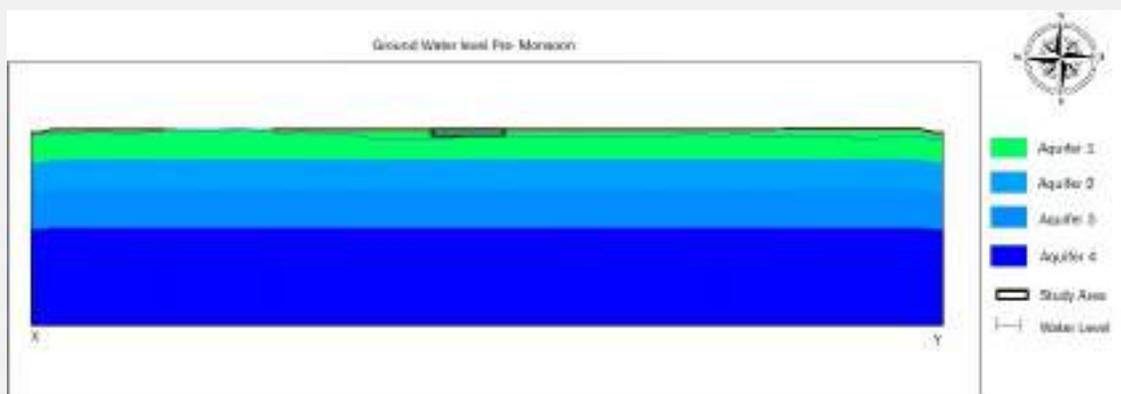


Fig.12 Ground water level pre-monsoon (MODFLOW output)

In the comparison with post monsoon (Fig. 11) and pre- monsoon(Fig.12) season data, the observed depletion of water is between 6.3 to 7.8 mbgl and fluctuation is very minimal. As per the available data of CGWB and simulation study of MODFLOW where is the percentage of error is 0.01. The simulation study done on study area in Fig 11 also supports the field studies data(Table.1).

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6. Hydrograph of the water table

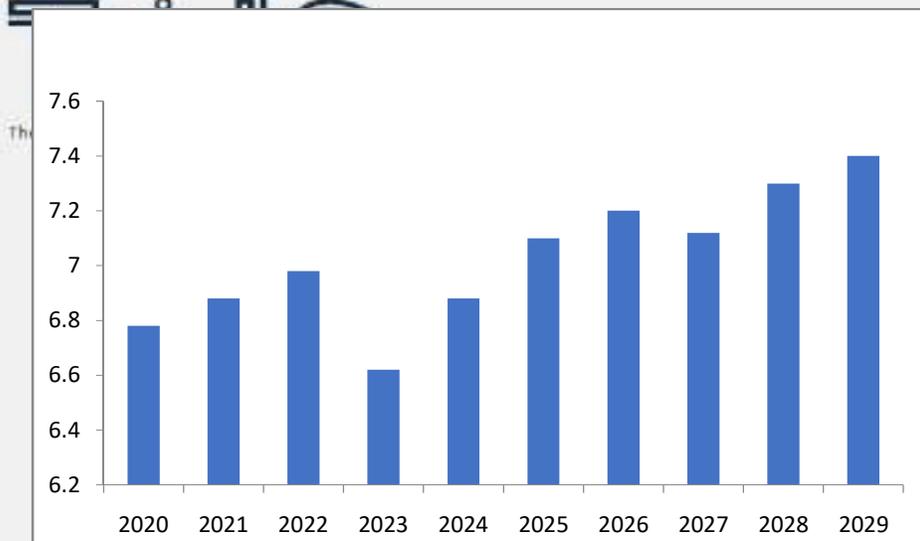


Fig. 13 Hydrograph of study area (Source: MODFLOW Simulation)

6.1 Hydrograph of water level (10 years)

The interpretation of ground water depth is done by MODFLOW simulation study which is at 6.78 mbgl in year 2020, and in later year fluctuation can be seen in fig no.13 but as per the available extraction rate (field studies discussion with locals and MODFLOW output) and use of ground water due to demands of agricultural, domestic and commercial purpose with changing metrological condition prediction of the groundwater table depth is at 7.4 mbgl in the year 2029(MODFLOW Simulation output) which is falling by 1 mbgl in depth in a decade.

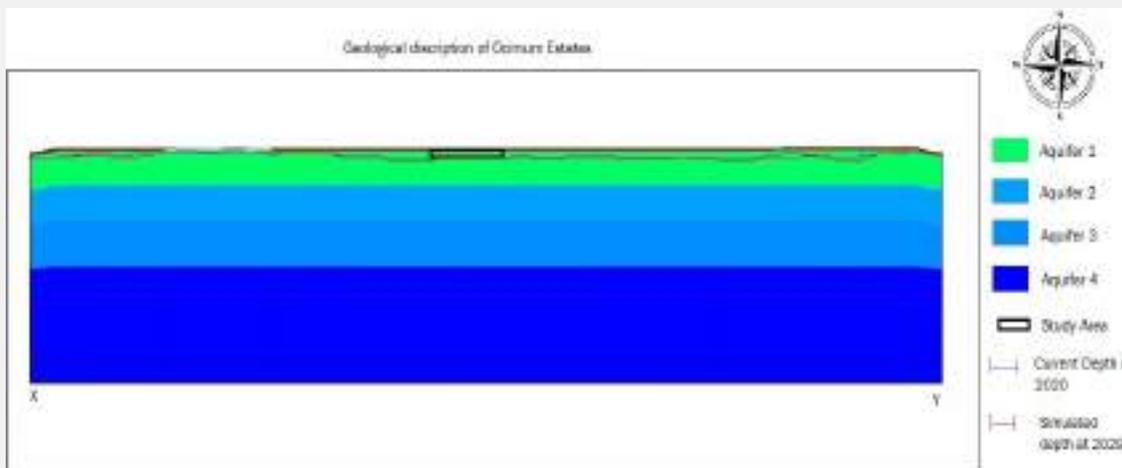


Fig. 14. Ground water level prediction

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## 7. Predicted water level analysis and comprehensive report

The computed water level accuracy was judged by comparing the mean error, mean absolute and root mean square error calculated. Root mean square (RMS) error is the square root of the sum of the square of the differences between calculated and observed heads, divided by the number of observation wells, which in the present simulation is falling between 6.30 to 7.50m . The correlation coefficient is 0.993. The absolute residual mean is similar to the residual mean except that it is a measure of the average absolute residual value. The absolute residual mean measures the average magnitude of the residuals, and therefore provides a better indication of calibration than the residual mean. The Predicted groundwater is falling within the range of 6.3 mbgl to 7.8 mbgl all over the area of 5km buffer zone (Fig no. 14).

In the case of same extraction rate for next 10 years the simulation study of MODFLOW shows only minor changes because of natural flow in ground water in which ground water table has minimal effect it is falling in the range of 7mbgl to 8.5mbgl . (Represented in fig. 14). In the study area the average depth of 6m has been recorded of ground water table.

### 7.1 Ground water resources

The ground water resources for the study area were assessed as per methodology recommended by ground water estimation committee'97. The details of resources calculated are given below in subsequent headings.

A.

a) Total geographical area in ha. = 7854 (5km radius is converted into hectare)

#### Ground water recharge :

b) Area not suitable for ground recharge in ha. = 2299.5

c) Area suitable for ground recharge in ha. = 5554.5

d) Average water level

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Pre-monsoon = 6.3 mbgl.

Post-monsoon = 5.8 mbgl.

e) Normal annual rain fall = 0.618 m.

f) Normal monsoon rain fall = 0.569 m.

g) Normal non monsoon rain fall = 0.80 m

h) Ground Water Recharge by rain fall infiltration method - The rain fall infiltration factors for different formations have been taken as those recommended by GEC 97 .The

equation used for computation of recharge is

$$R_{rf} = NAR \times A \times RFI$$

Where,

$R_{rf}$  = Recharge from rainfall

NAR = Normal annual rain fall

A = Area of the unit in ha

RFI = Rain fall infiltration factor

$$\text{Recharge from rainfall} = 0.618 \times 13400 \times 0.06$$

$$= 496.87 \text{ ham.}$$

### **b. Seepage from tanks/ ponds**

1. No of tanks = 4 (taken from 5Km Buffer of field visit)

2. Total water spreaded area in ha = 40

3. Seepage factor (m/year) = 0.6

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4. Total non monsoon seepage (ham) = 70

**c. Total annual recharge =**

Rainfall recharge + Seepage from irrigation + Recharge from tanks/ponds

$$= 496.87 + 1003 + 70$$

$$= 1569.87 \text{ ham}$$

**d. Net annual ground water availability**

Net annual ground water availability has been computed by deducting the unaccounted natural discharge from the total annual recharge as per the criteria recommended by GEC'97. In the study area 10% of replenishable ground water is considered to deduct from total recharge as it goes as base flow.

Net ground water availability = Total recharge - Base flow

$$= 1569.87 \text{ ham} - 156.98 \text{ ham}$$

$$= 1412.89 \text{ ham}$$

**B.**

**1) Domestic purposes** - Water draft has been estimated based on the village population and about 17 number of villages lies on the 5 kms radius of the study area and the average population is about 6500 of villages (Census 2011). The average per capita consumption has been taken as 110 liters per day by considering 100% dependence on the ground water. The total annual demand is calculated as follows

Annual ground water draft :

Total annual demand in ham = Population x 110 x 365 / 1000 x 10000

$$= 110,500 \times 90 \times 365 / 1000 \times 10000$$

$$= 362.99 \text{ ham}$$

**2) Ground water draft for irrigation:** Ground water draft for irrigation was calculated

from number of ground water abstraction structures present in the area. for irrigation annual deft 988.99 ham



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Table 3. Groundwater draft for irrigation

Ground water structure	No of Ground water structure	Unit Draft at ham	Gross draft ham
Tube well	395 (Assumed based on ground study)	2. 5	988.99

### C. Ground water balance (ham)

= Annual utilizable GW resource – Gross ground water draft ( )

= 1412.89 ham - 988.99 ham (Table No. 3)

= 423.99 ham

From the above it may be seen that the balance ground water resources in the area is of the order of 423.99 ham.

### D. Stage of ground water development

= Gross ground water draft x 100/Annual utilizable GW resource

= 988.99 \* 100/1412.89

= 69.99 %

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As per GEC'97, if the stage of development is less than 70% and the significant rate of water level decline has been taken between 2 cm to 5 cm trend as per local geological conditions, where as to calculate the parameters, population and agricultural draft has been assumed and simulated on the basis of the field study and on available reports of CGWB and Census data of the study area of 5km buffer, so on the basis of that the categorization of assessment, and MODFLOW simulation output matching with GEC assessment study, the groundwater water depth at study area considered in Safe Category. The stage of development in the study area as calculated above is coming around 69.99 % so the present study area is under **“Safe”** category (Table. 4).

Table 4. Criteria for Categorization of Assessment Unit (As per GEC'2006)

S.No	Stages of Ground water development	Significant Long Term Decline		Category
		Pre Monsoon	Post Monsoon	
1	$\leq 70\%$	No	No	Safe
2	$\geq 70\%$ and $\leq 90\%$	No	No	Safe
		Yes/No	No/Yes	Semi Critical
3.	$\geq 90\%$ and $\leq 100\%$	Yes/No	No/Yes	Semi Critical
		Yes	Yes	Critical
4.	$\geq 100\%$	Yes/No	No/Yes	Over Exploited
		Yes	Yes	Over Exploited

The ground water resources within 5 km of radius of the study area is estimated on the basis of norms as per GEC'97 which indicates that the total ground water resource of the present study area is of the order of 1569.89 Ham while the net available ground water resources in the area are of the order of 1412.89 Ham. gross ground water draft in the area is around 988.99 Ham while balance ground water resources are 423.89 Ham. The stage of ground water development in the study area and in 5km buffer is around 69.99% which comes in **“SAFE”** category.

### 8. Impact on ground water:

In the study area excavation is going on for foundation work of the Ocimum Estates project, which in not going give any effect on ground water regime. Movement of ground water depends on hydraulic characteristics of aquifer. In the study area the soil type has content of clay, silt and micaceous sand which lies under Ajabgarh unit and Varanasi order alluvium. These soil type formations are poor in primary porosity and permeability but have secondary porosity. The hydraulic conductivity and storativity values are moderate for these type of soil. For foundation work the dewatering of the study area is not more that approx 60m in radius. As

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there are limited extraction structures for drinking purpose within 200 m radius of Ocimum Estates and the aquifer is having moderate hydraulic parameters, impact on ground water of the area will be limited in extent or say negligible.

As per the water level data of tube well in existing neighboring villages of study area Ocimum Estates, the pre-monsoon ground water in the selected area varies between 6.3 mbgl to 7.8 mbgl and after monsoon (post Monsoon) season the water is ranging between 5.8mbgl to 6.6mbgl across the dissected area in the radius of 5km.

There is no noticeable fall in water table or change in quantity because of existing Ocimum Project activity. Farmers are taking wheat and sugarcane, gram and vegetables in the villages nearby to the Study area.

Regional flow study observation represents that water in this area is entering from West(W) direction and later on the flow is getting strong due to local area recharge from nearby agricultural field and leaving this area from East(E) direction and average hydraulic gradient of the area ranges between 1.5 to 3.3 m/km for aqueous zones in aquifer I and in aquifer II it varies between 6- 10 m/km .

There will not be any impact on land use because development and construction activities will be carried out only in restricted area of the polygon of proposed site. The geology and lithology of the area will also enhance the natural recharge in the area. Constant monitoring of ground water levels and quality is proposed during coming years. It can be concluded that construction activities within the study area of the Ocimum Estates area will not have any significant impact on the ground water regime of the study area of Ocimum Estates.

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**RE: OA 444/2023-PARYAVARAN VIKASH SANGH VS STATE OF HARYANA**

2 messages

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**Jitender Chaudhary, advocate** <jurisconsult2006@gmail.com>  
To: advprakashpande@gmail.com

Tue, Jan 23, 2024 at 12:40 PM

In the above-captioned matter pending adjudication before Hon'ble NGT, Principal Bench, New Delhi I am concerned for respondent no. 9-Neo Centra. Please find attached the reply to the Action Taken Report being filed on behalf of Respondent no.9.

Kindly acknowledge the receipt of the same.

Regards

Jitender Chaudhary, advocate

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**Juris Consult**  
**Advocates and Legal Consultants**  
**B-22, First Floor, Jangpura Extension**  
**New Delhi-110014**

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3615K

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**Jitender Chaudhary, advocate** <jurisconsult2006@gmail.com>  
To: advprakashpande@gmail.com

Tue, Jan 23, 2024 at 12:55 PM

Kindly ignore the earlier attachment. PFA the correct one.

Regards

Jitender Chaudhary, Adv

[Quoted text hidden]

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