MUDRA FINANCE LIMITED

VIPUL TECH SQUARE, GOLF COURSE ROAD, SECTOR-43,
GURGAON-122 009
Tel: 0124-4065500
CIN No.: U7010DL1997PLC085456

To,

Date: 01.06.2015

The Secretary,
Expert Appraisal Committee,
Infrastructure Development, Coastal Regulation Zone, Building/
Construction and Miscellaneous projects
Conference Hall (Brahmaputra),
1st floor, Vayu Wing, Indira Paryavaran Bhawan,
Jor Bagh Road, Aliganj,
New Delhi -110003.

Subject: **Reg. Amendment in Environmental Clearance (No. 21-1021/2007-IA.III dated May 22, 2008) issued for Residential Project "Vipul Gardens" at Sector-1, Village Dharuhera, District-Rewari, Haryana by M/s Mudra Finance Limited**

Sir,

We, M/s Mudra Finance Limited have obtained Environmental Clearance for Residential Project "Vipul Gardens" at sector-1, Village Dharuhera, District Rewari, Haryana (Rect No. 69 – Killa No. 15/2 , 16 , 23/2 , 24 , 25; Rect No. 68 – Killa No. – 21/1; Rect No. 72 – Killa No. – 3 , 4 , 5 , 6 , 7 , 15; Rect No. 73 – 1 , 8/2/1 , 11/1 , 9 , 10) vide No. 21-1021/2007-IA.III dated May 22, 2008 for an area of 54203.509 sq.m. and Built up area 80,146.752 sqm. However, our project is having a built up area of 1,09,660.42 sq.m as per approved site plan by DTCP Memo no. 3401 dt 12.02.2008 and as presented in the 28th meeting of EAC held in March 2008. Hence we require amended Environmental Clearance for the aforesaid project.

We believe that all environmental issues pertaining to the subject project have been covered in the submission mentioned below. We are enclosing following documents for your kind perusal:

1. Form 1 as per EIA Notification 2006.
2. Form 1 A as per EIA Notification 2006 duly filled with all requisite Annexure Drawings/Plans
3. Conceptual Plan
4. Soft copy of all the relevant documents in CD.

We, therefore request you to accord Environmental Clearance to the project based on above documents.

Thanking you.

Yours Faithfully,
For M/s Mudra Finance Limited

Authorized Signatory
Encl: As above

Amendment in EC of Residential Project "Vipul Garden"

Rect No. 69 – Killa No. 15/2 , 16 , 23/2 , 24 , 25; Rect No. 68 – Killa No. – 21/1
Rect No. 72 – Killa No. – 3 , 4 , 5 , 6 , 7 , 15; Rect No. 73 – 1 , 8/2/1 , 11/1 , 9, 10
Location –Sector-1, Village Daruhera, District Rewari, Haryana

(Total Site Area: 54203.509 m^2 i.e. 13.3939 acres, Built up Area: 1,09,660.42 m2)

FORM 1, 1A & CONCEPTUAL PLAN

FOR

ENVIRONMENTAL CLEARANCE

8(a), Category 'B1' of EIA Notification dated 14.09.06 and its subsequent amendments

PROJECT IN-CHARGE: Mr. S.P. Singh (Sr. General Manager)
Name of the Proponent: M/s Mudra Finance Limited
Address of proponent: G-12 A, First Floor, Hauz Khaas,
New Delhi-110016
Email: SPSingh@vipulgroup.in
Contact no.: 09811666959

PROJECT COST: ₹ 225 Crore




KADAM ENVIRONMENTAL CONSULTANTS
(Certificate No. NABET/EIA/1316/RA004)
Address: 871/B/3 GIDC, Makarpura, Vadodara, Gujarat, India, Pin- 390010
Phone No.: 0265-3001000; Fax No.:0265-3001069
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M/s Mudra Finance Ltd.

Corrigendum in EC of Residential Project "Vipul Garden" located in Sector-1, Village-Dharuhera, District – Rewari, Haryana.

QUALITY CONTROL							
Name of Publication	Form 1, Form 1A and Conceptual Plan for Group Housing Project "Vipul Garden" located in Sector-1, District - Dharuhera, Haryana						
Project Number	1520803806	**Report No.**	1	**Version**	1	**Released**	June, 2015
Prepared By	Dr Deepali Gangwar , Project Co-ordinator						
Reviewed By	Dr. Kamal Gangwar, EIA Co-ordinator						
Released By	Sheetal Kadam, Director						
DISCLAIMER							
Kadam has taken all reasonable precautions in the preparation of this report as per its auditable quality plan. Kadam also believes that the facts presented in the report are accurate as on the date it was written. However, it is impossible to dismiss absolutely, the possibility of errors or omissions. Kadam therefore specifically disclaims any liability resulting from the use or application of the information contained in this report. The information is not intended to serve as legal advice related to the individual situation.							

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LIST OF ANNEXURES

1 SCOPING

1.1 FORM – 1

The scoping for the project has been done based on FORM 1, as per EIA Notification, dated September 14, 2006 amended as on date. The scoping details are as follows:

I. Basic Information

S. No.	Item	Details
1	Name of the Project/s	Group Housing Project "Vipul Garden"
2	S. No. in the Schedule	8 (a) – Building and Construction projects
3	Proposed capacity / area / length / tonnage to be handled/ command area / lease area / no. of wells to be drilled	Total Plot Area – 54,203.509 m^2 Proposed F.A.R – 94488.422m^2 Proposed Ground Coverage – 8124.836 m^2 Proposed Built up Area – 1,09,660.42 m^2
4	New / Expansion / Modernization	Amendment in EC granted vide No. 21-1021/2007-IA.III dated May 22, 2008.
5	Existing Capacity / Area etc.	Total Plot Area – 54,203.509 m^2 Built up Area – 1,09,660.42 m^2
6	Category of Project (A or B)	"B"
7	Does it attract the general conditions? If yes, please specify.	As per the Gazette Notification issued by Ministry of Environment, Forests & Climate Change dated 11th September 2014, the general conditions are not applicable for the Building and construction projects covered under 8(a) category.
8	Does it attract specific condition? If yes, please specify	No
9	Location	
	Plot Survey / Khasra No.	Rect No. 69 – Killa No. 15/2 , 16 , 23/2 , 24 , 25 Rect No. 68 – Killa No. – 21/1 Rect No. 72 – Killa No. – 3 , 4 , 5 , 6 , 7 , 15 Rect No. 73 – 1 , 8/2/1 , 11/1 , 9 , 10
	Village	Dharuhera
	Tehsil / Taluka / Mandal	Rewari
	District	Rewari
	State	Haryana
10	Nearest railway station / airport / along with distance in km.	*Railway Station:* Rewari Junction ~ 15 km in WSW direction. *Airport:* Indira Gandhi International Airport, Delhi is ~ 52 km in NE direction.
11	Nearest town, city, district headquarters along with distances in kms	The project lies within the Rewari District ~16 km in West direction. District Headquarters': Rewari

S. No.	Item	Details
12	Village Panchayat, Zilla Parishad, Municipal Corporation, Local Body (complete postal address with telephone nos. to be given)	Rewari Municipal Corporation Near Bhadwash Chowk Rewari, Haryana Phone: 01274-225263 Email: secymc.rewari@gmail.com
13	Name of the applicant	M/s Mudra Finance Limited
14	Registered address	G-12 A, First Floor, Hauz Khaas, New Delhi-110016
15	Address for correspondence	G-12 A, First Floor, Hauz Khaas, New Delhi-110016
	Name	Mr. SP singh
	Designation	Sr. General Manager
	Address	G-12 A, First Floor, Hauz Khaas, New Delhi-110016
	Pin Code	122002
	E-mail	SPSingh@vipulgroup.in
	Telephone no.	09811666959
	Fax no.	
16	Details of alternative sites examined, if any. Location of these sites should be shown on the Toposheet	The project site is appropriately selected and the location of site is shown on toposheet as per attached ***Annexure 1***
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	Individual project
21	Whether the proposal involves approval / clearance under: if yes, details of the same and their status to be given: The Forest (Conservation) Act, 1980 The Wildlife (Protection) Act, 1972 The C.R.Z Notification, 1991	No
22	Whether there is any Government order / policy, relevant / relating to the site	No
23	Forest land involved (ha.)	No forest land is involved.
24	Whether there is any litigation pending against the project and / or land in which the project is proposed to be set up? Name of the Court Case No. Order / directions of the Court, if any and its relevance with the proposed project	No litigation pending

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 proposed project will not change the land use of the proposed site. Approval from DTCP has been obtained vide Endst. No. DS (II)-2007/2656-67 dated 25.01.2007. (License No. 40 of 2007). License and land documents are attached as ***Annexure 2 & Annexure 3***
1.2	Clearance of existing land, vegetation and buildings?	No	Residential project doesn't require clearance of existing land, vegetation and buildings as it was developed on flat and barren piece of land.
1.3	Creation of new land uses?	Yes	The project will be developed as a Group Housing Colony with provision of requisite amenities as per local Bye laws. Also, the land has been earmarked for residential facilities as per Dharuhera Master Plan 2021. Location of project site on Master Plan is also attached as ***Annexure 4***
1.4	Pre-construction investigations e.g. bore houses, soil testing?	Yes	The soil has been tested before construction and detailed geotechnical report is attached as ***Annexure 5***
1.5	Construction works?	Yes	Construction of residential apartments, Community Centre, Shops and swimming pool shall be constructed.
1.6	Demolition works?	No	Not Applicable since there is no existing structure at the proposed project.
1.7	Temporary sites used for construction works or housing of construction workers?	Yes	Approximately 250 numbers of workers shall be working in 8 hour shifts at the site and will stay in temporary shelters provided at/near site.
1.8	Above ground buildings, structures or earthworks including linear structures, cut and fill or excavations	Yes	The proposed project is Group Housing Colony. The excavated earth generated during construction will be reused for backfilling, internal road development and landscape area. Top soil will be reclaimed, temporarily stored and further used for green area development.
1.9	Underground works including mining or tunneling?	Yes	No underground work including mining or tunneling is required except Excavation work for Basements.
1.10	Reclamation works?	No	No reclamation works to be done.
1.11	Dredging?	No	No dredging work is to be done.

S. No.	Information/Checklist Confirmation	Yes / No?	Details thereof (with approximate quantities / rates, wherever possible) with source of information data
1.12	Offshore structures?	No	No offshore structures.
1.13	Production and manufacturing processes?	No	The proposed Project is residential in nature and doesn't involve production and manufacturing process of any kind.
1.14	Facilities for storage of goods or materials?	Yes	*Construction Phase* Minimum bulk material for construction will be brought as and when required and will be temporarily stored at site with proper arrangement of storage and under proper cover. *Operation Phase:* Provisions for separate warehouse, utilities and storage.
1.15	Facilities for treatment or disposal of solid waste or liquid effluents?	Yes	Sewage generated will be treated in sewage treatment plant and then reused for flushing and green belt development purpose. The solid waste would be segregated into biodegradable waste and recyclable waste. The recyclable waste will be sold off to recyclers and the biodegradable waste will be collected in bins and transferred to a designated location.
1.16	Facilities for long term housing of operational workers?	Yes	During the operation phase, the project being Group Housing Colony will include - residential apartments, Community Centre, Shops and swimming pool shall be constructed.
1.17	New road, rail or sea traffic during construction or operation?	No	Two internal 24 m wide roads and a 12 m wide service road will be built. The site is located at NH-8 and except the internal roads, no other road need to be constructed.
1.18	New road, rail, air waterborne or other transport infrastructure including new or altered routes and stations, ports, airports etc.?	No	-
1.19	Closure or diversion of existing transport routes or infrastructure leading to changes in traffic movements?	No	The project doesn't involve closure or diversion of existing transport routes or infrastructure leading to changes in traffic movements.
1.20	New or diverted transmission lines or pipelines?	No	Not Applicable
1.21	Impoundment, damming, culverting, realignment or other changes to the hydrology of watercourses or aquifers?	No	Not Applicable
1.22	Stream crossings?	No	Not Applicable
1.23	Abstraction or transfers of water from ground or surface waters?	Yes	The required water will be supplied by Haryana Urban Development Authority (HUDA).
1.24	Changes in water bodies or the land surface affecting drainage or run-off?	No	Not Applicable
1.25	Transport of personnel or materials	Yes	Transport of personnel and materials will be

S. No.	Information/Checklist Confirmation	Yes / No?	Details thereof (with approximate quantities / rates, wherever possible) with source of information data
	for construction, operation or decommissioning?		required for both construction and operation phases.
1.26	Long-term dismantling or decommissioning or restoration works?	No	Not Applicable
1.27	Ongoing activity during decommissioning which could have an impact on the environment?	No	Not Applicable
1.28	Influx of people to an area either temporarily or permanently?	Yes	During construction phase, workers will be employed temporarily. Once the project attains completion, there will be influx of residents, staff, visitors etc.
1.29	Introduction of alien species?	No	Not Applicable
1.30	Loss of native species or genetic diversity?	No	Not Applicable
1.31	Any other actions?	No	Not Applicable

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

S. No.	Information/Checklist confirmation	Yes/ No?	Details thereof (with approximate quantities / rates, wherever possible) with source of information data
2.1	Land especially undeveloped or agricultural land (ha)	No	Not Applicable
2.2	Water (expected source & competing users) unit: KLD	Yes	During Construction phase, water requirement will be met by private tankers (treated water from HUDA STP) with prior agreement with water supplier. During operation phase, total 628 KLD water will be required including 352 KLD fresh water and 276.05 KLD treated water from STP. Source: HUDA
2.3	Minerals (MT)	No	Not Applicable
2.4	Construction material stone, aggregates, sand / soil (expected source, MT)	Yes	Construction material such as bricks and sand, aggregate, cement and steel, wood, paint, hardware, CP and sanitary fittings, all shall be purchased, transported and processed locally.
2.5	Forests and timber (source, MT)	No	Not Applicable
2.6	Energy including electricity and fuels (source, competing users) unit: fuel (MT), energy (MW)	Yes	Expected Demand : 4,716 kVA (3,773 KW) Backup provided – 4 x 1000 kVA 1 x 500 kVA Source: Haryana State Electricity Board Fuel Used : HSD Fuel requirement: Approx. 810 Lit/hr.
2.7	Any other natural resources (use appropriate standard units)	Yes	Non conventional energy in the form of solar energy shall be used for street lightning.

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)	Yes	There will be no storage of hazardous chemicals (as per MSIHC rules) except the used oil of the back-up DG sets. Suitable management practice will be adopted for the same.
3.2	Changes in occurrence of disease or affect disease vectors (e.g. insect or water borne diseases)	No	Suitable drainage and waste management practices will be adopted in both construction as well as operational phase which will restrict 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	It is expected that 250 numbers of workers will be employed during construction phase. In the operation phase, about 1200 people will be employed as direct and indirect employment, for housekeeping, maintenance of electrical sub-station, gardening, security, vendors and household jobs. Hence the site operations will lead to enhanced employment.
3.4	Vulnerable groups of people who could be affected by the project e.g. hospital patients, children, the elderly etc.,	No	No nearby hospitals are observed in the study area. Noise and air pollution control measures will be taken so as to cause minimum harm to nearby residents.
3.5	Any other causes	No	No other causes identified.

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	Soil, overburden or mine wastes	Yes	Excavated surplus earth will be used for backfilling in the project premises and also used for development of green belt.
4.2	Municipal waste (domestic and or commercial wastes)	Yes	During the construction phase, solid wastes would comprise of excavated earth, with bits and pieces of steel, packaging material, wood used for shuttering purpose, unused pieces of brick, metals, stones, marbles etc. During the operation phase, solid waste would mainly be biodegradable kitchen waste and other recyclable wastes such as paper waste, glass, wood pieces, plastic bags, cartons etc. The solid waste generated would be around 1.8 ton/day. Solid Waste Collection System

S. No.	Information/Checklist confirmation	Yes/ No?	Details thereof (with approximate quantities / rates, wherever possible) with source of information data
			The solid waste generated will be collected through the chutes which will be provided to each multistory building, chutes will be connected to the solid waste collection room at ground level to each building. Solid waste will be segregated into biodegradable waste and recyclable waste will be sold off to recyclers and the biodegradable waste will be collected in bins and transferred to a designated collection point for disposal to nearby municipal bins.
4.3	Hazardous wastes (as per Hazardous Waste Management Rules)	Yes	The only hazardous wastes in the project will be used /spent oil from backup DG sets, which is classified as Hazardous Waste Category 5.1 as per Hazardous Wastes (Management & Handling) Rules 2008. Spent Oil from backup DG sets will be carefully stored in HDPE drums in isolated covered facility. This spent oil will be sold to authorized recyclers. Suitable care will be taken so that spills/ leaks of spent oil from storage could be 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	It is estimated that about 15 kg/day of sludge will be generated which will be used as manure in green belt.
4.7	Construction or demolition wastes	Yes	The construction waste will consist of construction debris along with cement bags, small cut-pieces of steel, insulating and packaging materials etc. cement bags, waste paper and card board packaging material will be sold off to recycler. Unusable steel scrap will also be collected at site and sold to recyclers.
4.8	Redundant machinery or equipment	No	Not Applicable
4.9	Contaminated soils or other materials	No	Not Applicable
4.10	Agricultural wastes	No	Not Applicable
4.11	Other solid wastes	No	Not Applicable

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

S. No.	Information/Checklist confirmation	Yes/ No?	Details thereof (with approximate quantities / rates, wherever possible) with source of information data
5.1	Emissions from combustion of fossil fuels from stationary or mobile sources	Yes	HSD will be used to run DG set during power failure only.
5.2	Emissions from production processes	Yes	From moving vehicles
5.3	Emissions from materials handling including storage or transport	Yes	At the time of transportation dust will be generated. This will be restricted to construction phase and construction site only.

S. No.	Information/Checklist confirmation	Yes/ No?	Details thereof (with approximate quantities / rates, wherever possible) with source of information data
5.4	Emissions from construction activities including plant and equipment	Yes	At the time of transportation and construction, dust will be generated. Water sprinkling will be carried out to minimize dust suppression.
5.5	Dust or odours from handling of materials including construction materials, sewage and waste	Yes	*Construction Phase:* During the construction phase, on-site sanitation facilities shall be provided. *Operation Phase:* During the operation phase, sewage will be collected and treated in 475 KLD capacity STP.
5.6	Emissions from incineration of waste	No	Incineration is not required.
5.7	Emissions from burning of waste in open air (e.g. slash materials, construction debris)	No	Not Applicable
5.8	Emissions from any other sources	No	Not Applicable

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

S. No.	Information/Checklist confirmation	Yes/ No?	Details thereof (with approximate quantities / rates, wherever possible) with source of information data
6.1	From operation of equipment e.g. engines, ventilation plant, crushers	Yes	During construction, the machinery used for construction will be of high standards. These standards itself take care of noise pollution control/ vibration control and air emission control. Hence, insignificant impacts due to construction machinery are envisaged. Apart from this, the construction activities will be restricted to daytime only. Source of noise in the operational phase will be compressors, pumps, oil pulse tubes, assembly tools and grinders. DG sets will be used in case of power failure or in emergency. DG Set will be provided with acoustic enclosures as per CPCB guidelines.
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.
6.4	From blasting or piling	No	Not Applicable
6.5	From construction or operational traffic	Yes	During Construction noise will be generated due to construction activity but it will be for short term only. During operation noise will be generated due to traffic. Moreover noise will be generated due to operation of DG sets. Hence, DG sets will be provided with acoustic enclosures to maintain the noise level within limits. DG sets will operate in case of power failure.

S. No.	Information/Checklist confirmation	Yes/ No?	Details thereof (with approximate quantities / rates, wherever possible) with source of information data
			Impact of noise on onsite workers are expected to be highest but can be reduced substantially with use of PPE like earplugs and earmuffs.
6.6	From lighting or cooling systems	No	Not Applicable
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

S. No.	Information/Checklist confirmation	Yes/ No?	Details thereof (with approximate quantities / rates, wherever possible) with source of information data
7.1	From handling, storage, use or spillage of hazardous materials	No	The only hazardous waste in the project will be spent oil from DG sets. The spent oil will be carefully stored in HDPE drums under isolated storage, and periodically sold to authorized recyclers. All precautions will be taken to avoid spillage from the storage.
7.2	From discharge of sewage or other effluents to water or the land (expected mode and place of discharge)	No	There will be no discharge of effluent or untreated sewage into water or land and the waste water will be collected and treated into sewage treatment plant. Treated waste water will be reused in landscaping, flushing and remaining waste water will be discharged into municipal sewer line.
7.3	By deposition of pollutants emitted to air into the land or into water	No	Not Applicable
7.4	From any other sources	No	Not Applicable
7.5	Is there a risk of long term build up 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	No	Not Applicable
8.2	From any other causes	Yes	During **construction phase** possibilities of accidents may be fall from height, scaffolds, temporary stairs, cutting and welding, electrical fitting etc. During **operation phase** possibilities of accidents may be electrical fitting etc.
8.3	Could the project be affected by natural disasters causing environmental damage e.g. floods, earthquakes, landslides, cloudburst	Yes	Project area is categorized in seismic intensity Zone III, which is classified as having a fairly less probability of moderate earthquake shocks measuring 5-6 on the Richter scale.

S. No.	Information/Checklist confirmation	Yes/ No?	Details thereof (with approximate quantities / rates, wherever possible) with source of information data
	etc)?		The construction and structural design is as per Codes to negate the threat of environmental and other damages.

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 Facilities, ancillary development or development stimulated by the project which could have impact on the environment e.g.: supporting infrastructure (roads, power supply, waste or waste water treatment, etc.) housing development extractive industries supply industries, (other)	Yes	The proposed development being in the form of Group Housing Scheme will cater 635 flats and 176 houses for EWS and will accommodate approximately housing to 3927 people. Further the scheme will include shops, swimming pool and two basements for parking cars. Two internal 24m wide roads and a 12 m wide service road is being built. The project site is located adjacent to NH-8.
9.2	Lead to after-use of the site, which could have an impact on the environment	No	No increase in traffic and there will be positive impact of socio-economic environment.
9.3	Set a precedent for later developments	Yes	The project will lead to development of a Group Housing Colony, which will generate number of employment opportunities.
9.4	Have cumulative effects due to proximity to other existing or planned projects with similar effects	Yes	As Above

III. Environmental Sensitivity

S. No.	Areas	Name / Identity	Aerial Distance (within 15 km) of the proposed project location boundary
1	Areas protected under international conventions, national or local legislation for their ecological, landscape, cultural or other related value	No	There is no area protected under international conventions, national or local legislation for their ecological, landscape, cultural or other related value.
2	Areas which are important or sensitive for ecological reasons - Wetlands, watercourses or other water bodies, coastal zone, biospheres, mountains, forests	No	There are no areas within 15 km of the Project site location which are important or sensitive for ecological reasons.
3	Areas used by protected, important or sensitive species of flora or fauna for breeding, nesting, foraging, resting, over wintering, migration	No	There is no area that is used by protected, important or sensitive species of flora/fauna for breeding, nesting, foraging, resting over wintering, migration.

S. No.	Areas	Name / Identity	Aerial Distance (within 15 km) of the proposed project location boundary
4	Inland, coastal, marine or underground waters	No	Not Applicable
5	State, National boundaries	Yes	The nearest state border shared between Haryana and Rajasthan is about 6 km.
6	Routes or facilities used by the public for access to recreation or other tourist, pilgrim areas	Yes	NH-8 is adjoined to the project site. The site will be connected to the various places in the state.
7	Defense installations	No	No defense installations
8	Densely populated or built-up area	Yes	Rewari is ~ 16 km in West Direction.
9	Areas occupied by sensitive man-made land uses (hospitals, schools, places of worship, community facilities)	Yes	*Hospitals:* Kalawati Hospital is ~ 15 km in East direction. *Schools:* Shemrock Stepping Stones is ~ 3.4 km in SSE direction.
10	Areas containing important, high quality or scarce resources (ground water resources, surface resources, forestry, agriculture, fisheries, tourism, minerals)	No	There are no areas within 15 km of the project boundary site containing important, high quality or scarce resources (ground water resources, surface resources, forestry, agriculture, fisheries, tourism, minerals etc.
11	Areas already subjected to pollution or environmental damage. (Those where existing legal environmental standards are exceeded)	No	There are no areas within 15 km of the project boundary site that 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)	Yes	Project area is categorized in seismic intensity Zone III, which is classified as having a fairly less probability of moderate earthquake shocks measuring 5-6 on the Richter scale.

"I hereby given undertake 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 given, if any project will be revoked at our risk and cost."

Date:

Place: Gurgaon

S.P. Singh
Sr. General Manager
M/s Mudra Finance Ltd.
Golf Course Road, Sector -43,
Gurgaon - 122009

IV. Proposed Terms of Reference for EIA studies

Not Applicable.

1.2 FORM – 1 A

CHECK LIST OF ENVIRONMENTAL IMPACTS

(Project proponents are required to provide full information and wherever necessary attach explanatory notes with the Form and submit along with proposed environmental management plan & monitoring programme)

1. Land Environment

S. No.	Item	Details
1.1	Will the existing land use get significantly altered from the project that is not 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 be 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 existing land will not be changed as per local land use plan. The proposed project is the construction of Group Housing colony over a land of 13.394 acre or 54,203.509 m^2. The project is developing as per HUDA norms. Satellite Image is provided in ***Annexure 6*** Site Layout Plan is provided in ***Annexure 7*** Contour Plan is attached at ***Annexure 8***
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.	Plot Area: 54,203.509 m^2 Permissible Ground coverage *(35% of the Plot Area)*: 18,971.228m^2 Proposed Ground coverage (*14.98 % of the Plot Area)*: 8124.836m^2 Permissible F.A.R *(1.75)*: 94,856.140 m^2 Proposed F.A.R *(1.745)*: 94488.422 m^2 Built up area: 1,09,660.42m^2 Parking Provided: 748 ECS Power Requirement: 3,773 kW
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, disturbance to the local ecology)	The probable impacts due to the proposed Area development project on the existing facility will be both short term and long term in nature. About 20,597.33 m^2 i.e. 37.9 % of the plot area will be developed as green area in the form of shelter belt plantation, avenue plantation, lawns, herbs and shrubs etc. which shall have a positive impact on the surrounding. Direct or indirect employment opportunities likely to be generated during the operation will be about 1200. The project will be developed as Group Housing Colony

S. No.	Item	Details
		along with housing facility for residential flats, housing for economically weaker section, shops and community centers. There may be minimal damage to flora during site preparation activities in the construction phase, however the same will be compensated by green belt development.
1.4	Will there be any significant land disturbance resulting in erosion, subsidence & instability? (Details of soil type, slope analysis, vulnerability to subsidence, seismicity etc may be given).	There will be no land disturbance due to the project. Soil testing was carried out at project site to assess the soil quality and the results will be provided later. Project area is categorized in seismic intensity Zone III, which is classified as having a fairly less probability of moderate earthquake shocks measuring 5-6 on the Richter Scale. The structure design is as per codes to negate the threat of environmental and other damages.
1.5	Will the proposal involve alteration of natural drainage systems? (Give details on a contour map showing the natural drainage near the proposed project site)	No alteration of natural drainage system and topography is envisaged, since the site is a flat and barren land. Contour map given in ***Annexure 8*** shows that there is no alteration of drainage system.
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 proposed project is Group Housing colony project. There will be two level basement and excavated earth is approximately 25000 m^3, which is used for leveling of site. Top soil is reclaimed, temporarily stored and further used for green area development.
1.7	Give details regarding water supply, waste handling etc during the construction period.	Water requirement during construction period will be supplied by private tankers. Onsite sanitation facilities will be provided by incorporating septic tanks and soak pits.
1.8	Will the low-lying areas & wetlands get altered? (Provide details of how low lying and wetlands are getting modified from the proposed activity)	No wetlands or low-lying areas are found in the vicinity of the project.
1.9	Whether construction debris & waste during construction cause health hazard? (Give quantities of various types of wastes generated during construction including the construction labour and the means of disposal)	The construction wastes will not cause any health hazard. Solid waste during the construction phase would comprise mainly of excavated, concrete debris, steel scrap, insulation material for air-conditioning and packaging material. Top soil is reclaimed, temporarily stored and further used for green area development. Surplus earth will be used for back filling. Cement bags, waste paper, cardboard packing material and unusable

S. No.	Item	Details
		steel scrap will be collected at site and sold to authorized recyclers/ vendors. Solid waste will be segregated into biodegradable waste will be collected in bins and transferred to a designated collection point for disposal to nearby municipal bins.

2. Water Environment

S. No.	Item	Details
2.1	Give the total quantity of water requirement for the proposed project with the breakup of requirements for various uses. How will the water requirement met? State the sources & quantities and furnish a water balance statement.	During Construction phase, water requirement will be met by private tankers with prior agreement with water supplier. During operation phase, total 628 KLD water will be required including 352 KLD fresh water and 276.05 KLD treated water from STP. Source: HUDA The details of water requirement, its breakup and water balance is provided in ***Annexure 9.***
2.2	What is the capacity (dependable flow or yield) of the proposed source of water?	Water will be supplied by HUDA.
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)	Water will be supplied by HUDA.
2.4	How much of the water requirement can be met from the recycling of treated wastewater? (Give the details of quantities, sources and usage)	During operation phase, total 628 KLD water will be required including 352 KLD fresh water and 276.05 KLD treated water from STP. Treated water from STP will be reused and recycled in flushing, horticultural purpose, road washing. Remaining treated waste water will be discharged into municipal sewer line.
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, Water will be supplied by HUDA.
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)	Maximum 404.116 KLD of treated wastewater will be generated from proposed project. Water consumption details along with water balance diagram is attached as ***Annexure 9***.
2.7	Give details of the water requirements met from water harvesting? Furnish details of the facilities	Rain water harvesting details are provided in ***Annexure 10a.***

S. No.	Item	Details
	created.	Rain water harvesting pits (5 no's) will be provided inside the project premises. Plan showing location of RWH pits is attached as ***Annexure 10b.***
2.8	What would be the impact of the land use changes occurring due to the proposed 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?	Complete rain water harvesting details are provided in ***Annexure 10a*** & ***Annexure 10b.***
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)	No, during operation phase fresh water will be supplied by HUDA. Assurance for water supply during operational phase has been obtained from HUDA.
2.10	What precautions/measures are taken to prevent the run-off from construction activities polluting land & aquifers? (Give details of quantities and the measures taken to avoid the adverse impacts)	During construction phase, on-site sanitation facilities will be provided and water will be reused and disposal into septic tanks followed by soak pits. Precaution will be taken for wastewater collection and disposed so that overflow will be negligible.
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)	During the operation stages, the storm water will be collected into the surface drainage network inside the project premises. The drain sizes and sections will be designed in such a way that they can take the load of the peak rainfall period. All the surface drains will be covered by gratings Proper land gradient will be provided so that water logging inside the campus does not occur. Collected rain water will be recharge into ground water.
2.12	Will the deployment of construction labourers particularly in the peak period lead to unsanitary conditions around the project site (Justify with proper explanation)	The construction laborers will be hired from local area. During construction phase, on-site sanitation facilities will be provided. All the basic facilities will be provided to labour.
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)	During operation phase, total 628 KLD water will be required including 352 KLD fresh water and 276.05 KLD treated water from STP. Treated water from STP will be reused and recycled in flushing, horticultural purpose, road washing. Remaining treated waste water will be discharged into municipal sewer line. The schematic diagram of the STP is given in

S. No.	Item	Details
		Annexure 11.
2.14	Give details of dual plumbing system if treated waste used is used for flushing of toilets or any other use.	Dual plumbing system will be implemented separately to domestic water supply and treated water supply for flushing.

3. Vegetation

S. No.	Item	Details
3.1	Is there any threat of the project to the biodiversity? (Give a description of the local ecosystem with it's unique features, if any)	No. The project will not pose any threat to the bio-diversity of the locality. Also, as the project site does not contain any water body, therefore, no scope of disturbance to the aquatic flora is involved. Moreover, quite a number of trees are also going to be planted during the later period of the construction stage. The species will be predominantly native in nature so that they merge with the local ecosystem.
3.2	Will the construction involve extensive clearing or modification of vegetation? (Provide a detailed account of the trees & vegetation affected by the project)	There will be minimal damage to the floral diversity, and every precaution will be taken to preserve them. There will be development of greenbelt in the project. The plant species around the site are local tree species and no rare or endangered tree species are found in the site, hence, the vegetation of the area unlikely to be affected.
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)	Adequate measures will be taken to minimize the likely impacts of the proposed project on the surrounding as well as the project site itself and documented in the Environmental Management Plan.

4. Fauna

S. No.	Item	Details
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 scope of displacement of terrestrial as well as aquatic fauna is involved due to the proposed project.
4.2	Any direct or indirect impacts on the avifauna of the area? Provide details.	No direct and indirect adverse impact is envisaged to fauna due to the project
4.3	Prescribe measures such as corridors, fish ladders etc to mitigate adverse impacts on fauna.	Not applicable

5. Air Environment

<table>
<tr><th>S. No.</th><th>Item</th><th>Details</th></tr>
<tr><td>5.1</td><td>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 constructions)</td><td>The proposed project is Group Housing Colony. During the operational stage of the project, there is no constant source of emission from the building, as mostly nonpolluting activities will be carried out. The only source of air pollution is vehicular movement in and around the project premises and emission from DG sets.</td></tr>
<tr><td>5.2</td><td>What are the impacts on generation of dust, smoke, odorous fumes or other hazardous gases? Give details in relation to all the meteorological parameters.</td><td>During the construction stage of the project, there will be generation of dust, which is controlled by sprinkling of water, covering building materials by tarpaulin, covering the structure with Hessian clothes etc.
Gases generating during the construction and operation stages of the project are below the specific limit as per norms.</td></tr>
<tr><td>5.3</td><td>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 & exit to the project site.</td><td>No. Adequate parking provisions are provided.
<table><tr><th>Parking Level</th><th>No of ECS</th></tr><tr><td>Upper Basement</td><td>210</td></tr><tr><td>Lower Basement</td><td>210</td></tr><tr><td>Stilt</td><td>48</td></tr><tr><td>Surface</td><td>280</td></tr><tr><td>Total ECS Provided</td><td>748</td></tr></table>Parking plans are provided in Annexure 12 & 7.</td></tr>
<tr><td>5.4</td><td>Provide details of the movement patterns with internal roads, bicycle tracks, pedestrian pathways, footpaths etc., with areas under each category.</td><td>Traffic circulation plan is provided in Annexure 7.</td></tr>
<tr><td>5.5</td><td>Will there be significant increase in traffic noise & vibrations? Give details of the sources and the measures proposed for mitigation of the above.</td><td>Minimum increase in noise due to vehicular movement on the surrounding area and DG set. Acoustic enclosure will be used for minimizing noise. Trained staff will be used for managing traffic flow.</td></tr>
<tr><td>5.6</td><td>What will be the impact of DG sets & other equipment on noise levels & vibration in & ambient air quality around the project site? Provide details.</td><td>Noise will be emitted during construction due to operation of construction machinery like batching plant, concrete pumps, tower cranes, pile drivers, DG sets, Air compressors etc. Vulnerable receptors would not be significantly affected. Most of the noise generated in this phase would be spread throughout the site depending upon equipment operation at a location. Impact on onsite workers are expected to be highest but</td></tr>
</table>

S. No.	Item	Details
		can be reduced substantially with use of PPE like earplugs and earmuffs. One of major sources of noise during operational phase will also be the diesel based generator required for power backup. The DG set will be housed in the basement. As per regulatory norms all DG sets will be provided with acoustic enclosures and emit noise within permissible limits as per CPCB.

6. Aesthetics

S. No.	Item	Details
6.1	Will the proposed constructions in any way result in the obstruction of a view, scenic amenity or landscapes? Are these considerations taken into account by the proponents?	No, the project will enhance the aesthetics of the area.
6.2	Will there be any adverse impacts from new constructions on the existing structures? What are the considerations taken into account?	This will be entirely new construction and will not have any adverse impact on the existing structures.
6.3	Whether there are any local considerations of urban form & urban design influencing the design criteria? They may be explicitly spelt out.	Landuse and Design as per Local Development Plan.
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, there are no archaeological sites observed within the study area.

7. Socio-Economic Aspects

S. No.	Item	Details
7.1	Will the proposal result in any changes to the demographic structure of local population? Provide the details.	Limited change in the local demographic structure is envisaged for the project due to employment opportunities.
7.2	Give details of the existing social infrastructure around the proposed project.	There are basic social infrastructure like roads, schools, hospitals and settlements available around the proposed project.
7.3	Will the project cause adverse effects on local communities, disturbance to sacred sites or other cultural values? What are the safeguards proposed?	No, Local communities have a symbiotic & mutually beneficial interaction with the developments.

8. Building Material

S. No.	Item	Details
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)	Mostly concrete (M 20 to M 40 specifications) will be used. The cement with proper mixture of fly ash and AAQC blocks shall be used.
8.2	Transport and handling of materials during construction may result in pollution, noise & public nuisance. What measures are taken to minimize the impacts?	Transportation of raw material will cause impacts for short-term only. The air pollution will be minimized by water sprinklers and by covering the vehicles during transport. The trucks used for transport will be thoroughly checked for emission parameters and will be properly maintained. The raw materials transport will be avoided during the peak hours to reduce traffic load.
8.3	Are recycled materials used in roads and structures? State the extent of savings achieved?	Yes. Cement with proper mixture of flyash and AAQC blocks will be used.
8.4	Give details of the methods of collection, segregation & disposal of the garbage generated during the operation phases of the project.	During the operation phase, solid wastes would mainly be kitchen waste and recyclable wastes. The solid waste will be segregated into biodegradable waste and recyclable waste. The recyclable waste will be sold off to recyclers and the biodegradable waste will be collected in bins and transferred to a designated collection point for disposal to nearby municipal bins.

9. Energy Conservation

S. No.	Item	Details
9.1	Give details of the power requirements, source of 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?	Power requirement for the Group Housing Colony will be 4,716 kVA (3,773 KW).
9.2	What type of, and capacity of, power back-up do you plan to provide?	Backup provided – 4 x 1000 kVA 1 x 500 kVA Source: Haryana State Electricity Board Fuel Used : HSD Fuel requirement: Approx. 810 Lit/hr. The non conventional energy, the solar energy shall be used for the street lighting. Design approaches as well as the greenery and tree plantation will help to shut out the excess heat from entering the living spaces.

S. No.	Item	Details
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?	As it is a residential complex, the glass will be used in limited places like window panes.
9.4	What passive solar architectural features are being used in the building? Illustrate the applications made in the proposed project.	Design approaches will be considered to shut out excess heat from entering such as using solar shade screens, roof overhangs and other landscaping.
9.5	Does the layout of streets & buildings 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.	Solar energy based devices will be appropriately used for the street lighting.
9.6	Is shading effectively used to reduce cooling/heating loads? 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?	Yes, Thermal Insulation is provided on rooftop to conserve energy. Shading options wherever available will be used for energy saving.
9.7	Do the structures use energy-efficient space conditioning, lighting and mechanical systems? Provide technical details. Provide details of the transformers and motor efficiencies, lighting intensity and air-conditioning load assumptions? Are you using CFC and HCFC free chillers? Provide specifications.	Yes. M/s Mudra Finance Ltd. will ensure the use of energy efficient lightning and ventilation. This is done by incorporating modern architectural designs and techniques. Energy efficient building orientation would be taken into account while constructing buildings. Design approaches will be considered to shut out excess heat from entering the living spaces, such as using solar shade screens, roof overhangs, awnings, trees and other landscaping.
9.8	What are the likely effects of the building activity in altering the microclimates? Provide a self-assessment on the likely impacts of the proposed construction on creation of heat island & inversion effects?	The building will be designed as energy efficient and environmental friendly building that will control formation of heat island effect. There will be also sufficient green cover at the site to reduce formation of heat island.
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-values or the R-values of the individual components.	As it is a residential complex, the glass will be used in limited places like window panes.
9.10	What precautions & safety measures are proposed against fire hazards? Furnish details of emergency plans.	Fire alarm and fire fighting system will be installed in all areas and floors inside the buildings. Fire hydrant system and sprinkler system will be provided only for basement areas and corridors.
9.11	If you are using glass as wall material provides	

S. No.	Item	Details
	details and specifications including emissivity and thermal characteristics.	As it is a residential complex, the glass will be used in limited places like window panes only.
9.12	What is the rate of air infiltration into the building? Provide details of how you are mitigating the effects of infiltration.	Adequate provisions for managing air filtration as per ASHRAE will be provided.
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 is the only non conventional source used for the street lighting.

10. Environment Management Plan

S. No.	Item	Details
10.1	The Environment Management Plan would consist of all mitigation measures for each item wise activity to be undertaken during the construction, operation and the entire life cycle to minimize adverse environmental impacts as a result of 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 site including fire.	Please refer ***Annexure 13.***

CONCEPTUAL PLAN

Introduction

The Residential Project "Vipul Garden" has been developed by M/s Mudra Finance Ltd. The project is located in Sector-1, Dharuhera, Haryana adjacent to NH-8 has already received Environmental clearance from Ministry of Environment & Forests (MoEF) vide Letter No. 21-1021/2007-IA.III dated 22nd May 2008 for the site admeasuring 54,203.509 m^2 (13.394 acres) and Built up area 80,146.752 sq.m. While we have presented our case for 1,09,660.42 m^2 builtup area as per approved site plan by DTCP Memo no. 3401 dt 12.02.2008. EC letter is attached as ***Annexure I.***

The group promises to challenge the standards set by the industry to spread more edges and mileages for the customers and also wishes to create innovative architecture to transform its real estate vision into reality. Thus it endeavors to set up new marvels in the real estate arena.

The residential group housing colony includes residential apartments, EWS, Swimming Pool, Shops and School etc.

Site location and Connectivity

The proposed project is located in Sector-1, District-Dharuhera, Haryana. Rewari Junction is ~ 15 km in WSW direction and Indira Gandhi International Airport, Delhi is ~ 52 km in NE direction. The project site is located adjacent to NH-8.

Fig 1: Site Location of Residential Project "Vipul Garden" at Sector-1, Dharuhera, Haryana

Project Details:

The plot area of the residential project "Vipul Garden" in accorded EC is 54,203.509 m^2 (13.394 acres) and total built up area in accorded EC is 80,146.752 m^2. However, the total built up area is 1,09,660.42 m^2. The detailed Area Statement is as follows -

Table 1: Project Infrastructure details

S. No.	Particulars	Area (in m^2) as per accorded EC
1.	Plot Area	54,203.509
2.	Permissible Ground Coverage (@ 35% of 13.394 acres)	18,971.228
3.	Proposed Ground Coverage	8124.836 (14.98% of Plot Area)
4.	Permissible F.A.R (@ 1.75 on the area of 13.394 acres)	94,856.140
5.	Proposed F.A.R	94488.422 (@1.74)
6.	Basement Area	15,172
7.	Stilt Area	1442.680

Table 2: Built up Area Details

S.No.	Particulars	Existing
1.	Proposed F.A.R.	94488.422
2.	Basement Area	15172
	Total	**109660.422**

Table 3.1: Break up of Area use

Type of Building	TYPE A	TYPE B	TYPE C	EWS	Community Centre	Swimming Pool	Shops	Others*
No. of Blocks	4	6	1	1	1	1	1	-
No. of storey's	G+14	G+14	G+14	G+7	G+2	G	G+1	G
Ground Coverage (m^2)	2818.188	3649.974	519.880	375.478	739.688	70.00	176.856	96.585
F.A.R.	36,318.916	48,043.086	6,612.261	2,872.437	1,148.32	-	270.264	**-**
Total dwelling unit	232	348	55	176	-	-	-	-
Population	1,160	1,740	350	116	-	-	-	**-**

Population:

There will be an influx of 3,927 persons for the Group Housing Colony "Vipul Garden" including Type-A, Type B, Type C flats, EWS flats, Shops, School population, visitors for retail (shops), including security and maintenance staff. Population break up is given below in Table 4.

Table 4: Population break up

S.No.	Details	Expected Population
1.	**Apartments** • Type A (232 units) • Type B (348 units) • Type C (55 units)	**3175 persons** (@ 5 PPU) 1160 1740 275
2.	**Visitors** *(for residential apartments) &* **Security and Maintenance Staff**	**300 persons**
3.	Type D – 176 EWS Unit (@ 2 PPU)	**352**
4.	**Shops**	**50 persons**
5.	**School**	**50 persons**
Total Population		**3927 persons**

Water Requirement Details:

During Operation Phase - During operation phase, Water requirement will be met by HUDA. Total 628 KLD water will be required including 352 KLD fresh water and 276.05 KLD treated water from STP.

Table 3: Water balance for Operational Phase

S. No	Description	Per capita water demand	Fresh Water requirement (KLD)	Treated Water (KLD)	Total Water (KLD)	Waste Water (KLD) @80 %
1.	Residential apartments (3175 persons)	135 lit/day	285.8	142.9	428.63	342.9
2.	EWS (352 persons)	135 lit/day	31.7	15.8	47.52	38.02
3.	Shops/School (100 persons)	45 lit/day	3	1.5	4.5	3.6
4.	Visitors (300 persons)	15 lit/day	1.5	3.0	4.5	3.6
5.	Filter Backwash	45 lit/day	20	-	20	16
6.	Horticulture	5.5 lit/sqm	-	112.85	112.85	-
7.	Swimming Pool make up water	10% of total requirement	10	-	10	-
Total			**352**	**276.05**	**628**	**404.116-20.21 (sludge & evaporation loss) =**

					383.91

Waste water Generation and Treatment:

It is estimated that about 383.91 KLD of waste water will be generated during operation phase, which will be treated in sewage treatment plant of 475 KLD capacity and reused and recycled for green area, road washing and flushing purpose. Remaining 107.86 KLD treated waste water will be discharged into municipal sewer line.

SEWAGE TREATMENT PLANT:

Sewage Treatment Plant of capacity 475KLD based on Activated Sludge Process using Extended Aeration technology shall be provided in the project premises.

Sewerage System:

Sewage treatment Plant having a capacity of 475 KLD will be provided within the Project premises. The Sewage treatment Plant based on Activated Sludge Process using Extended Aeration technology will be designed to treat a sewage quantity of 488.82 cu. mt/day having characteristics as mentioned below.

Process Description:

The activated sludge process is an aerobic, biological sewage treatment process. In this process, raw sewage is aerated in an aeration tank for some hours. During the aeration, the microorganisms in the sewage multiply by assimilating part of the influent organic matter. As a result of this process, biomass is generated in the aeration tank which is generally flocculent and quick setting. It is separated from the aerated sewage in the secondary settling tank and is recycled continuously to the aeration tank. The mixture of recycled sludge and sewage in the aeration tank is referred as "Mixed Liquor". The mixed liquor suspended solids (MLSS) content is generally taken as an index of mass of active microorganisms in the aeration tank.

Table 4: Waste water quality

Parameters	Value Before Treatment	Value after Treatment
pH	7.5 – 8.5	6.0 – 8.5
B.O.D	250 – 450 mg/L	Less than 30 mg/L
Suspended Solids	250 – 400 mg/L	Less than 30 mg/L
C.O.D	600 – 800 mg/L	Less than 60 mg/L
Oil & Grease	50 – 100 mg/L	Less than 10 mg/L

Main Components of Extended Aeration Method are:

1. Equalization Tank
2. Aeration Tank
3. Secondary Settling Tank
4. Sludge Holding Tank
5. Chlorination Tank
6. Treated waste water Tank
7. Soft Water Tank
8. Electro Mechanical Tank

The Sewage treatment plant shall be designed to receive continuous sewage inflow within the plant room allocated on the site plan. The ease of maintenance and operation is of utmost importance in the design of sewage treatment Plant. The location of sewage treatment Plant is given below in Figure 2.

Inlet Screen Chamber -

Raw sewage shall flow into the inlet screen chamber by gravity. Large solid particles shall be intercepted by a fine step screen. A manual screen shall be installed in parallel with the screw screenas a standby screen when the step screen is under maintenance.

Equalization Tank -

The sewage enters in the collection cum equalization Tank for flow and sewage quality equalization.

Aeration Tank –

The sewage will go to aeration tank for high MLSS and low F/M. Sewage shall be retained in the aeration tank for the minimum of 24 hours and subjected to biochemical oxidation by fine bubbles aeration.

Clarifier Tank –

The sewage after biooxidation shall enter the rectangular flat bottom sedimentation tank where the sludge effectively settles to the tank bottom. The clear effluent shall weir into the chlorination chamber. The activated sludge collected in the sludge tank shall be returned to the aeration tank for further oxidation of the incoming organic matter by means of automatic siphoning/pumping.

Chlorination Tank (CCT) –

Chlorine solution shall be metered into the sewage by an electric dosing pump paced according to the sewage inflow. The sewage shall be retained in the baffle walled chlorine tank for a minimum of two hours for effective disinfection prior to discharge.

Tertiary Treatment –

Treated water from Chlorine Contact Tank (CTT) will be pumped to Multi Grade Filters (MGF) for removal of suspended solids and turbidity. This filter shall be provided with sand and anthracities filtering media. After MGF, the treated water will be passed through the activated carbon filter (ACF) for further polishing and removal excess chlorine. After ACF, the treated water shall be stored in treated water tank.

Treated water Tank –

This tank is for the storage of treated water from the tertiary treatment unit. The treated water is to be used for the irrigation of green area.

Soft Water Tank –

After ACF, the treated water passes through softener. This tank is for the final storage of the soft water coming from the softener unit. The treated soft water is to be used for the cooling tower purpose.

Sludge Handling/ dewatering/disposal –

Excessive sludge shall be stored in the sludge holding tank for final dewatering and disposal through screw pump and filter press. This tank is for the storage of treated water from the tertiary treatment unit. The treated water is to be used for flushing purposes.

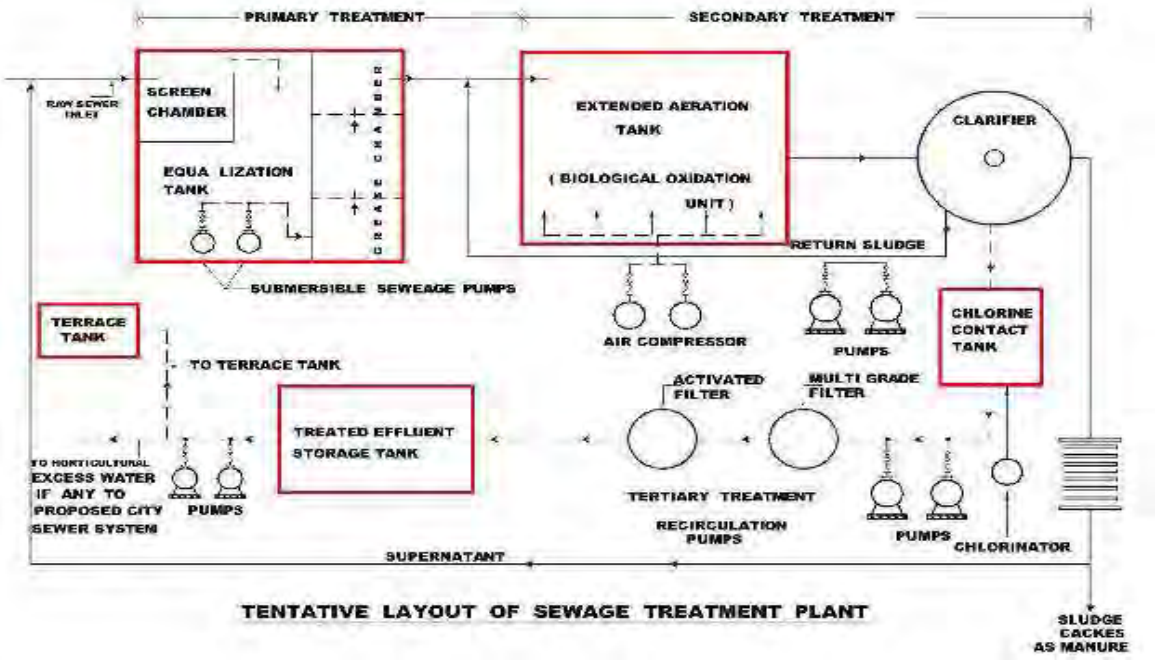


Figure 2: Schematic Diagram of STP

Storm Water Management

Rainwater Harvesting Plan

Adequate rainwater harvesting pits will be provided.
Rain water outlets shall be provided at various locations on terrace based on the criteria that minimum 1% slope to be provided towards rain water outlet from the ridges.
The rainwater collected from the rooftop areas within the project area will be conveyed into the rainwater harvesting system consisting of Desilting-cum-Filter Chamber, Oil & Grease Separators and finally recharges the groundwater.

Details of maximum storm water generated

Description	Area (m^2)	Maximum rainfall intensity (m/h)	Runoff coefficient	Total storm water (cum/h)
Roof area	8124.836	0.045	0.8	292.49
Green area	20597.33	0.045	0.2	185.37
Paved area	14861.34	0.045	0.5	334.380
Total				**812.24**

Total 5 number of rain water harvesting pits will be developed. 812.24 m^3 is the maximum generated runoff for 1 hour. Hence peak runoff can be taken for maximum 20 minutes. Hence (812.24/3 =270.74 m^3, say 271 m^3) of storage capacity will be required.

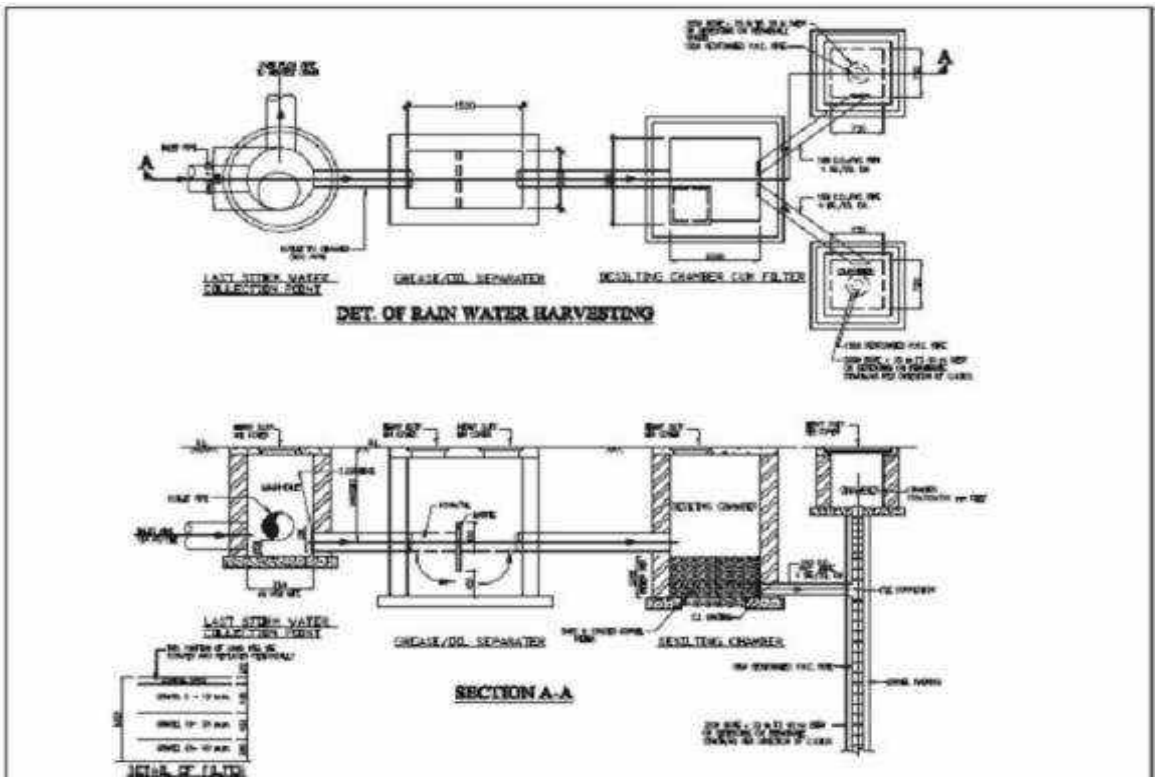
Details of Rainwater Harvesting Pits

Number of pits 5

Size of pits	3.5 x 4 x 4 (56 m^3)
Size of Bore	350mm dia
Size of pipe	150mm dia
Total volume of storage	56 X 5 = 280 m^3

So, storage capacity provided for peak hour runoff. Hence there will be no overflow during maximum rain fall.

Rain Water Harvesting Pit design -



Solid waste generation/ Disposal:

Solid waste generated in Project area will be 1.8 ton/day and mainly of domestic nature. Detail of solid waste generation is given in Table below. Solid waste will be segregated into biodegradable and non-biodegradable wastes and collected in separate bins. The non-biodegradable wastes will be sold to recyclers and the biodegradable wastes will be collected and disposed into composting pits at site.

Table 5: Solid Waste Generation

Nature of solid wastes	Biodegradable waste: Waste vegetables and foods Non biodegradable waste: Papers, cartons, thermocol, plastics, polythene bags, glass etc.

Segregation	The solid wastes generated (1.8 T/day will be collected and segregated into organic (1.1 T/day) and inorganic components and collected in color coded separate bins in individual flats.
Recycling	The inorganic wastes comprising recyclable materials, such as paper, plastic, glass etc., will be sold to prospective buyers. The organic biodegradable wastes (waste vegetables, foods etc.) will be transferred into the manure

Power Requirement:

The power shall be supplied by DHBVNL. The expected demand for the proposed project is 4,716 kVA (3,773 KW).

Details of the DG sets: There is a provision of DG sets with 4 x 1000 + 1 x 500 kVA capacity.

Parking Facilities:

Adequate surface parking and basement parking are provided.

- **Parking required as per Zoning Plan-**

Description	Total ECS required
For Residential Building **(@ 1 ECS per DU excluding EWS)** =For 635 Dwelling Units	**635 ECS**
Covered Car Parking (50% of total 635 ECS)	**318 ECS**

- **Parking Proposed-**

Description	Total ECS provided
Basement Parking (@ 1ECS/35 m^2) **Lower Basement** Total Basement area = 7,586 sqm Area required for parking = 7,350 sqm **Upper Basement** Total Basement area = 7,586 sqm Area required for parking = 7,350 sqm	**210 ECS** **210 ECS**
Stilt Parking (@ 1ECS/30 m^2) Total area required= 1440 sqm Area provided for parking = 1442.680 sqm	**48 ECS**
Surface Parking Total area required= 7,000 sqm Area provided for parking = 7,000 sqm	**280 ECS**
Total parking Provided	**420 + 48 + 280 = 748 ECS**

Landscaping:

About 20,597.33 m^2 i.e. 37.9% of the plot area will be developed as green area and will have positive impact on the surroundings.

- Shelter belt Plantation/Tree Plantation = 1,384.630 m^2 (15% of the Plot Area)
- Lawn area, herbs, shrubs etc. = 461.543 m^2 (5% of the Plot Area)

ANNEXURE

Annexure 1. Project Location on Toposheet

Phone:01724-2549549 E-mail:tcphry@gmail.com
http://tcpharyana.gov.in

Regd.

To

Mudra Finance Ltd.,
Vipul Tech Square, Golf Course Road,
Sector-43, Gurgaon -122009

Memo No. LC-825/PA(SN)/2015 2782 Dated: 19/2/15.

Subject: **Renewal of licence No. 40 of 2007 dated 25.01.2007 for Group Housing Colony for an area measuring 13.394 acres in the revenue estate of village Dharuhera Sec-1, Dharuhera Distt. Rewari.**

Reference: Your application dated 10.12.2014.

1. Licence no. 40 of 2007 dated 25.01.2007 granted to you vide this office letter Endst. No. LC-DS-II-2007/2656-67 dated 25.01.2007 for setting up of a Group Housing Colony on the land measuring 13.394 acres falling in the revenue estate of village Dharuhera Sector 1, Distt. Rewari is hereby renewed up to 22.01.2017 on the same terms and conditions laid down therein.
2. It is further clarified that this renewal will not tantamount to certification of your satisfactory performance entitling you for renewal of licence of further period and you will get the license renewed till the final completion of the colony is granted.
3. You shall complete the construction of the community buildings within a period of four years from the date of amendment of Section-3 of the Act no. 8 of 1975 i.e. 03.04.2012.
4. You shall transfer portion of sector / master plan road forming part of licensed area free of cost to the Govt., if not transferred earlier, in compliance of condition No. 4 of the licence.
5. You shall construct the portion of service road forming part of licensed area at your own cost and will transfer the same free of cost to the Govt. alongwith area falling in Green belt, if not transferred earlier.
6. Original Licence no. 40 of 2007 dated 23.01.2007 is also returned herewith.

A Rastogi

Anurag Rastogi
Director General,
Town & Country Planning Department,
Haryana, Chandigarh.

Endst no: LC-825-PA (SN)-2015/ Dated:

A copy is forwarded to following for information and further necessary action.

1. Chief Administrator, HUDA, Panchkula.
2. Chief Engineer, HUDA, Panchkula.
3. Chief Account's officer O/o STP (M).
4. Senior Town Planner, Gurgaon.
5. District Town Planner (HQ) Sh. P.P. Singh with request to update the status on website.
6. District Town Planner, Rewari.

Assistant Town Planner (HQ),
O/o Director General, Town and Country Planning,
Haryana, Chandigarh

D Kanuhera

146.

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

Licence No. 40 **of 2007.**

1. This licence has been granted under the Haryana Development & Regulation of Urban Areas Act, 1975 & the Rules made thereunder to M/s. Mudra Finance Ltd 1497, Bhardwaj Bhawan, Wazir Nagar, Kotla Mubarakpur, New Delhi for setting up of a Group Housing Colony at village Dharuhera, District Rewari.
2. The particulars of the land wherein the aforesaid colony is to be set up are given in the schedule annexed hereto and duly signed by the Director, Town & Country Planning, Haryana.
3. The licence is granted subject to the following conditions:
   a) That the Group Housing Colony is laid out to conform to the approved layout plan and development works are executed according to the designs and specifications shown in the approved plan.
   b) That the conditions of the agreements already executed are duly fulfilled and the provisions of Haryana Development and Regulation of Urban Areas Act ,1975 and Rules 1976 made thereunder are duly complied with.
   c) That the demarcation plan of the colony area is submitted before starting the development works in the colony and for the approval of zoning plan.
4. That the portion of Sector /Master plan road which shall form part of the licenced area shall be transferred free of cost to the Government in accordance with the provisions of Section 3(3)(a)(iii) of the Haryana Development and Regulation of Urban Areas Act, 1975.
5. That you will have no objection to the regularization of the boundaries of the licenced land through give equal and take equal with the land that HUDA is finally able to acquire in the interest of planned development and integration of services. The decision of the competent authority shall be binding in this regard.
6. That you shall obtain approval /NOC from the competent authority to fulfill the requirements of notification dated 14-09-2006 issued by the Ministry of Environment & Forests, Govt of India before starting the development works in the colony.

7. The licence is valid upto 22-1-2009.

(S.S.Dhillon)
Director,
Town & Country Planning,
Haryana, Chandigarh.

Dated: Chandigarh

The 23-1-2007.

Endst. No. DS(II)-2007/ 2656-67 Dated:- 25-1-07

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

1. M/s. Mudra Finance Ltd 1497, Bhardwaj Bhawan, Wazir Nagar, Kotla Mubarakpur, New Delhi alongwith a copy of agreement LC-IV and Bilateral agreement.
2. Chief Administrator, HUDA, Panchkula.
3. Managing Direc.or, HVPN, Planning Directorate, Shakti Bhawan, Sector-6, Panchkula.
4. Addl. Director Urban Estates, Haryana, Panchkula.
5. Administrator, HUDA, Gurgaon.
6. Engineer-In- Chief, HUDA, Panchkula.
7. Superintending Engineer, HUDA, Gurgaon along with a copy of agreement.
8. Land Acquisition Officer, Gurgaon
9. Senior Town Planner, Gurgaon. He will ensure that the colonizer shall obtain approval/NOC as per condition No. 6 above before starting the Development Works.
10. Senior Town Planner (Enforcement), Haryana, Chandigarh.
11. District Town Planner, Rewari along with a copy of agreement.
12. Accounts Officer, O/O Director, Town & Country Planning, Haryana, Chandigarh along with a copy of agreement.

District Town Planner (Hq) DN
For Director, Town and Country Planning,
Haryana, Chandigarh.

Annexured - A-7

To be read with licence No. 40 of 2007

Details of land owned by M/s. Mudra Finance Ltd village Dharuhera, District Rewari.

Village	Rect No.	Killa No	Area K-M
Dharuhera	69	15/2	7-12
		16	8-0
	68	21/1	3-12
	69	23/2	1-12
		24	8-0
		25	8-0
	72	3	7-7
		4	7-19
		5	8-0
		6	7-19
		7	7-16
		15	7-8
	73	1	8-0
		8/2/1	0-13
		11/1	0-5
		9	8-0
		10	8-0
		Total:	107.3 Or 13.394 Acres

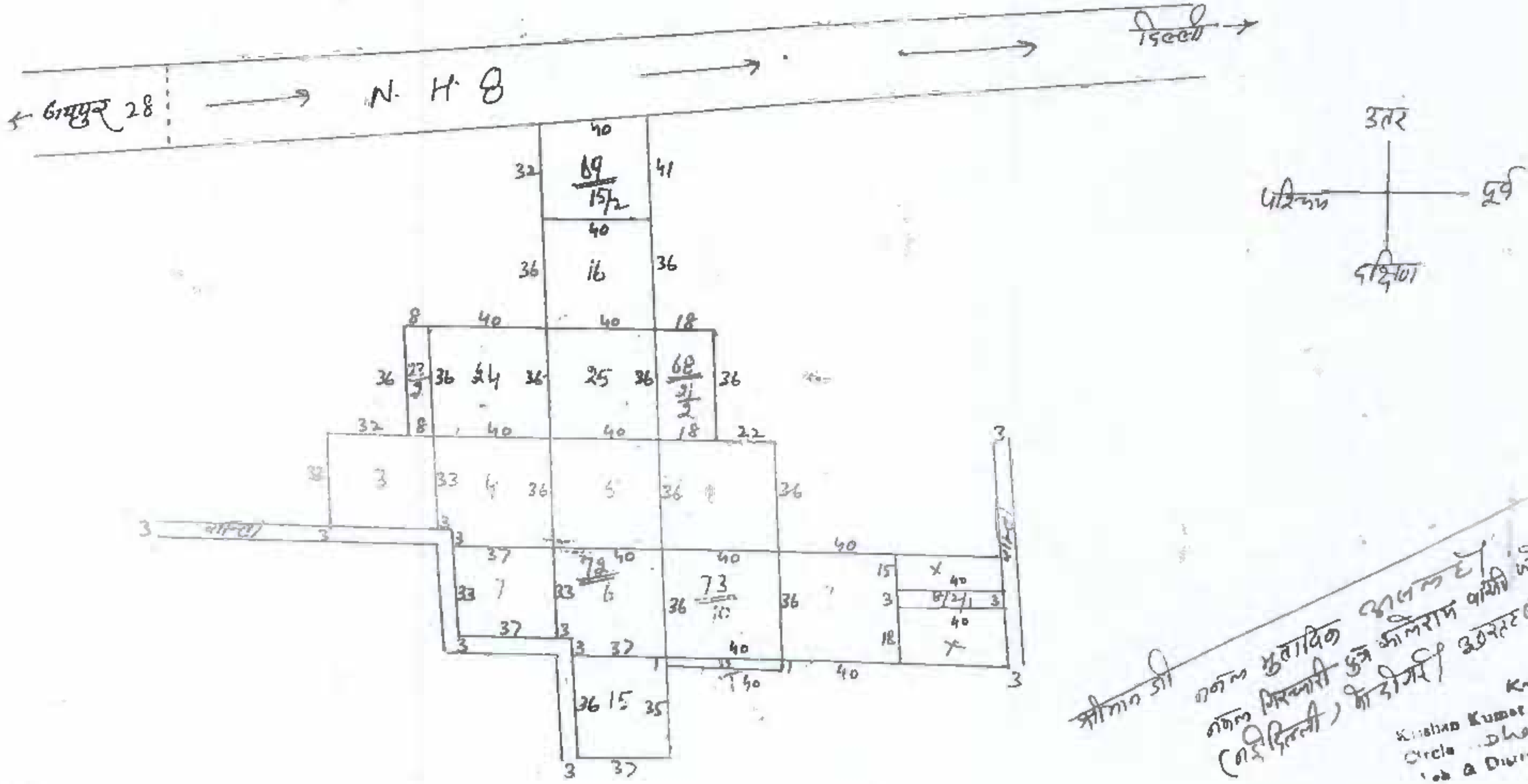
Director
Town and Country Planning,
Haryana, Chandigarh

2 Page

नकल अक्स शजरा कीला नम्बरी मौजा- धारूहेड़ा तह० रेवाड़ी जिला- गुड़गांवा साल 1959-60

पैमाना = 40 करम फी इन्च

कीला = 40 x 36 करम



श्रीमान जी नकल मुताबिक असल है। नकल गिरधारी पुत्र ओमराम वासी ... (नई दिल्ली) को दी गई।

Kishan Kumar Patwari
Circle Dharuhera
Teh & Distt Rewari

पटवारी कानूनगो फार्म नं० 10 — 41943—D.L.R.—Item No. [illegible]—H.G.[illegible]

नकल जमाबन्दी गांव प्यारूहेड़ा तहसील रेवाड़ी जिला रेवाड़ी साल 2003-04

1	2	3	4	5	6	7	8	9	10	11	12
खेवट या जमाबन्दी नम्बर	खतौनी नम्बर	नाम तरफ या पत्ती और जमा सहित नम्बरदार का नाम	विवरण सहित मालिक का नाम	विवरण सहित काश्तकार का नाम	कुएं या सिंचाई के अन्य साधन का नाम	नम्बर खसरा या मुरब्बा और कीले का नम्बर	रकबा और किस्म जमीन	हर और संख्या के ब्यौरे के साथ लगान जो मुजारा देता है	[illegible]	माल और मतबाई के ब्यौरे सहित मांग	अभ्युक्ति
411/375	441 मिन	प्रदीप आदि नम्बरदार पालू	हरगोविन्द पुत्र गिरधारीलाल पुत्र [illegible]डमल वासी मसानी	खुदकाश्त व मकबूजा मालिक		68/21/1	3-12 चाही		कब्जा	11-35	8444 बेच
						69/23/2	1-12 चाही		व परता	माल 7-32	
						24	8-0 चाही		बशरह	सबाई 4-03	
						25	8-0 चाही		खेवट		
						72/3	7-7 चाही		नं. (1) एक		
						4	7-19 चाही				
						5	8-0 चाही				
						6	7-19 चाही				
						7	6-16 चाही				
						15	7-8 चाही				
						73/1	8-0 चाही				
						8/2/1	0-13 गै.मु. रास्ता				
						11/1	0-5 चाही				
						9	8-0 चाही				
						10	8-0 चाही				
						किता 15	91-11				

श्रीमानजी, नकल मुताबिक [illegible] किशनलाल [illegible] वासी गुड़गांवा [illegible] ऑफिस/पुन पास [illegible]

Kush [illegible] 02-7-08

[illegible] Kumar Patwari Sadar [illegible] Teh & Distt Rewari

रजिस्टर इन्तकाल

नवीन रजिस्टर इन्तकालात गांव चारोड़ा नं. हदबस्त 299 तहसील ० जिला रेवाड़ी बुक नम्बर

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	इन्द्राज जमाबन्दी गुजस्ता या आखरी बाकी इन्तकाल जिसकी तरमीम मतलुब है							इन्द्राज जदीद जो अब कायम किया जाएगा						
नम्बर शुमार	नं. खाता जमाबन्दी खाता	नाम तरफ या थाक	नाम मालक व अहवाल	नाम काश्तकार व अहवाल	नम्बर व नाम खेत व रकबा व किस्म जमीन	मामला या लगान	नम्बर खाता जमाबन्दी जदीद	नाम मालक व पहचान	नाम काश्तकार व अहवाल	नम्बर व नाम खेत व रकबा व किस्म जमीन	मामला या लगान	किस्म या तारीख इन्तकाल मय व [illegible]	फीस दाखल-खारज	रिपोर्ट पटवारी या तसदीक गिरदार कानूनगो
8444	411/441		हरगोविन्द पुत्र गिरधारीलाल पुत्र रूडमल वासी मसानी	बदस्तूर	68/21/1 3-12 चाही 69/23/2 1-12 चाही 24 8-0 चाही 25 8-0 चाही 72/3 7-7 चाही 4 7-19 चाही 5 8-0 चाही 6 7-19 चाही 7 6-16 चाही 15 7-8 चाही 73/1 8-0 चाही	बाकी	4/बी	मैसर्स मुद्रा फाईनेन्स लि. रजि. कार्यालय-1497 भारद्वाज भवन, वजीर नगर कोटला मुबारिकपुर नई दिल्ली H [illegible] [illegible] 10/4/06	बदस्तूर	68/91/1 3-12 चाही 69/23/2 1-12 चाही 24 8-0 चाही 25 8-0 चाही 72/3 7-7 चाही 4 7-19 चाही 5 8-0 चाही 6 7-19 चाही 7 6-16 चाही 15 7-8 चाही 73/1 8-0 चाही	/ / / / / / / / / /	वाका बैंक रजिस्ट्री मुद्रा वसीका नं. 2 दिनांक 3/4/06 95 ला मु० 9441,0940/- रु ½ सौ करोड़ पचास लाख 54 हजार नौ सौ चालीस रुपया	1 a [illegible] P.T.O.	Knsl [illegible] 07-4-06 [illegible] 7-4-06

~-15 [illegible]

1	2	3	4	5	6	7	8	9	10	11	12	13		
8444 चालू	511/551 चालू		हरगोविन्द चालू	बदस्तूर चालू	73/8/2/1 0-13 गैरमुमकिन 11/1 0-5 चाही 9 8-0 चाही 10 8-0 चाही किता 15 91-11			मैसर्स मुद्रा फाईनेन्स लि० चालू	बदस्तूर चालू	73/8/2/1 0-13 गैरमुमकिन 11/1 0-5 चाही 9 8-0 चाही 10 8-0 चाही किता 15 91-11 मालक		ग्रामीण बैंक चालू		

सीमावर्ती — मुताबिक [illegible] कृष्ण कुमार [illegible] हल्का [illegible] [illegible] 02-[illegible]

Krishan Kumar Patwari

[illegible] Patwari

रजिस्टर इन्तकाल

रजिस्टर इन्तकालात गांव [illegible] नं. हदबस्त 299 तहसील [illegible] जिला रेवाड़ी शर्क नम्बर

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

पटवारी कानूनगो फार्म नं० 10

5943— D. L. R.—Item No. 1—H. G. P., Chd.

नकल जमाबन्दी गांव धारूहेड़ा तहसील रेवाड़ी जिला रेवाड़ी साल 2003-04

1	2	3	4	5	6	7	8	9	10	11	12
नंबर या जमाबन्दी नम्बर	खतौनी नम्बर	नाम तरफ या पत्ती और जमा सहित नम्बरदार का नाम	विवरण सहित मालिक का नाम	विवरण सहित काश्तकार का नाम	कुआं या सिंचाई के अन्य साधन का नाम	नम्बर खसरा या मुरब्बे और कीले का नम्बर	[illegible]	[illegible]	किस्म या हिस्सा और भाव का दर	भाव और सवाई के आगे सहित मांग	अभ्युक्ति
555 / 521 मिन	606 मिन	प्रदीप आदि नम्बरदार पालू	हीराम्बरसिंह पुत्र रयालाल पुत्र धर्मसिंह ग्राम निवासी	खुदकाश्त		69 // 15/2	7-2 चाही		कब्जा व पड़ता शरह खेवट नं. (1) एक	0-60 माल	8445 बैय
						16	8-0 चाही			0-40 सवाई	
						किता 2	15-12			0-20	

नकल मुताबिक असल है) नकल [illegible] कुमार पुत्र किशनचन्द वासी [illegible] हल्का [illegible] गुड़गांव को दी गई। [illegible] पटवारी

02-7-08

K[illegible]shan Kumar Patwari
[illegible] Rewari

रजिस्टर इतकाल

नकल रजिस्टर इनतकालात गांव खोरुहेडा नं. हदबस्त 299 तहसील ? जिला रेवाड़ी बक नम्बर

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	इन्द्राज जमाबन्दी गुजस्ता या आखरी बाकी इन्तकाल जिसकी तरमीम मतलुब है							इन्द्राज जदीद जो अब कायम किया जाएगा						
नम्बर इन्तकाल	नं. खाता जमाबन्दी साबक	नाम तरफ या पाह	नाम मालक व अहवाल	नाम काश्तकार व अहवाल	नम्बर व नाम खेत व रकबा व किस्म जमीन	मामला या लगान	नम्बर खाता जमाबन्दी जदीद	नाम मालक व पहचान	नाम काश्तकार व अहवाल	नम्बर व नाम खेत व रकबा व किस्म जमीन	मामला या लगान	किस्म या तारीख इन्तकाल मय व जरूरत	फीस दाखल-खारज	रिपोर्ट पटवारी या तसदीक गिरदार कानूगो
8445	555/606		दीगम्बर सिंह पुत्र रामलाल पुत्र [illegible] सिंह वासी देह	बदस्तूर	69/15/2 7-12 चाही 16 8-0 चाही किता 2 15-12			मैसर्स मुद्रा फाईनैन्स लि० रजि० कार्यालय 1497 भारद्वाज भवन, वजीर नगर, कोटला मुबारिकपुर नई दिल्ली	बदस्तूर	69/15/2 7-12 चाही 16 8-0 चाही किता 2 15-12 सालम		बाका रहन रजिस्ट्री मुद्रा वसीका न0 14 दिनांक 05/4/06 जरिये [illegible] 1,6867500/- एक करोड़ अड़सठ लाख सड़सठ हजार पान्च सौ रुपये	100/-	Kmb [illegible] 07-4-06 [illegible] 7-4-06

आज [illegible] 10/4/06

[illegible] अधिकारी मंजूर किया जाता है [illegible] 10/4/06

एक जारी पुत्र [illegible] शाह [illegible] भिवानी कुमार [illegible]

पटवारी कानूनगो फार्म नं० 10

6338-D.L.R.—H.G.P., Pkl

जमाबन्दी गांव [illegible] तहसील व जिला रेवाड़ी साल 2008-09

1	2	3	4	5	6	7	8	9	10	11	12
खेवट या जमाबन्दी नम्बर	खतौनी नम्बर	नाम तरफ या पत्ती और जमा सहित नम्बरदार का नाम	विवरण सहित मालिक का नाम	विवरण सहित काश्तकार का नाम	कुएं या सिंचाई के अन्य साधन का नाम	नम्बर खसरा या मुरब्बे और कीले का नम्बर	रकबा और किस्म जमीन	दर और संख्या के ब्यौरे के साथ लगान जो मुजारा देता है	हिस्सा या हकीयत का पैमाना और बाछ का ढंग	माल और सवाई के ब्यौरे सहित मांग	अभ्युक्ति
469/411 मिन 535 मिन	500		मैसर्स मुद्रा फाईनेन्स लि० रजि० कार्यालय -1497 भारद्वाज भवन वजीरनगर कोटला मुबारिकपुर नई दिल्ली	मकबूजा मालकान		68/21/1	3-12 बंजरकदीम		[illegible]		
						69/15/2	7-12 बंजरकदीम				
						16	8-0 बंजरकदीम				
						23/2	1-12 बंजरकदीम				
						24	8-0 बंजरकदीम				
						25	8-0 बंजरकदीम				
						72/3	7-7 बंजरकदीम				
						4	7-19 बंजरकदीम				
						5	8-0 बंजरकदीम				
						6	7-19 बंजरकदीम				
						7	6-16 बंजरकदीम				
						15	7-8 बंजरकदीम				नकल मुताबिक असल है Krishan Kumar Patwari Cir. Dharuhera Teh. & Distt. Rewari

P.T.O.

469 चालू	500 चालू		मसर्स मुडा फाईनेन्स लि० चालू	मकबूजा मालकान चालू		73/1	8-0 बारानी कदीम
						8/2/1	0-13 गैर मुमकिन नाला
						9	8-0 बारानी कदीम
						10	8-0 बारानी कदीम
						11/1	0-5 बारानी कदीम
						किता 17	107-3 गैर मुमकिन बारानी कदीम

नकल मुताबिक असल के है। नकल श्री उमेशकुमार पुत्र किशनचन्द को दी गई। उजरत बाबत कॉपी गुडगांव वसूल पाई

Krish
17-10-2011

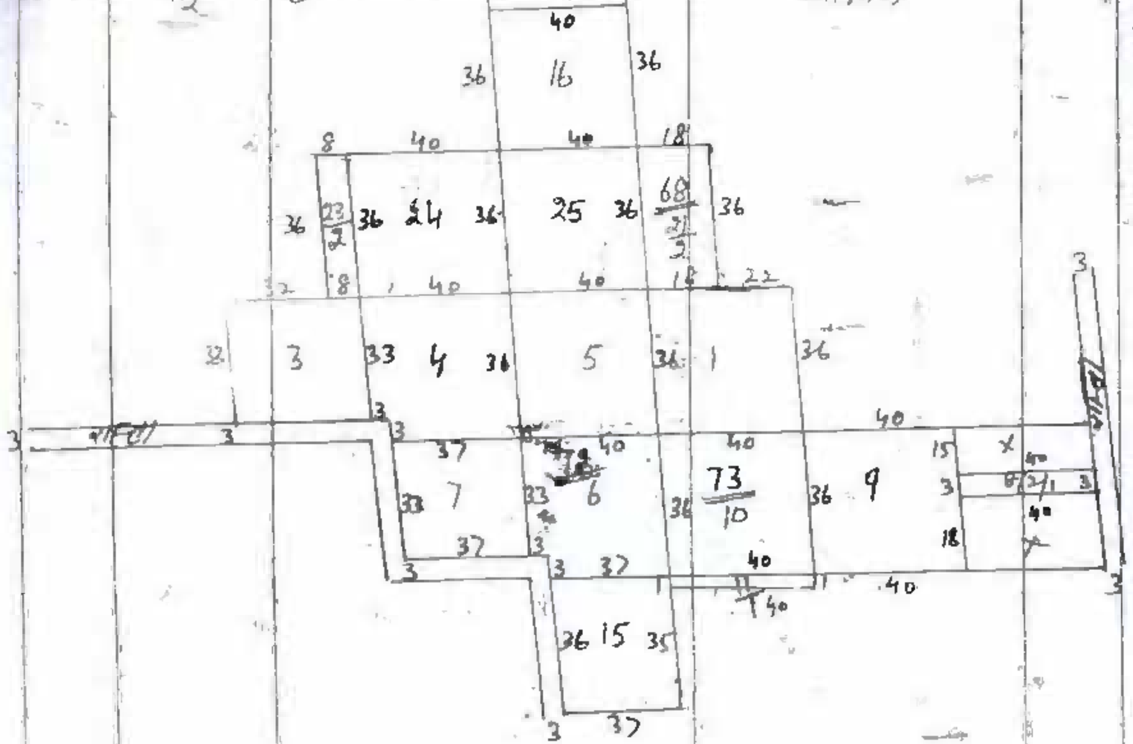
Krishan Kumar Patwari
Circle Dharuhera
Teh. & Distt. Rewari

16

पैमाना = 40 करम x 36 करम

1	2	3	4	5	6	7	8	9	10	11	12
जमाबन्दी ...	खतौनी नम्बर	नाम तरफ या पत्ती और जमा सहित नम्बरदार का नाम	विवरण सहित मालिक का नाम	विवरण सहित काश्तकार का नाम	कुएं या सिंचाई के अन्य साधन का नाम	नम्बर खसरा या मुरब्बे और कीले का नम्बर	रकबा और किस्म जमीन	...	किस्म या हकीयत का पैमाना और बाछ ...	... सहित लगान	अभ्युक्ति
28 / 411 / 775	441 / मिन	पट्टी ... नम्बरदार	हरगोविन्द पुत्र गिरधारी ...	खुदकाश्त व मकबूजा मालिक		68//21/1	3-12 चाही		...	11-35	
						69//23/2	1-12 चाही			7-32	
						24	8-0 चाही			4-03	
						25	8-0 चाही				
						72//3	7-7 चाही				
						4	7-19 चाही				
						5	8-0 चाही				
						6	7-19 चाही				
						7	6-16 चाही				
						15	7-8 चाही				
						73//1	8-0 चाही				
						8/1	6-13 गैर मुमकिन रास्ता				
						11/1	0-5 चाही				
						9	8-0 चाही				
						10	8-0 चाही				
						किता 15	91-11				

N. H. 8



नकल मुताबिक असल है

Patwari 10/4/06

Circle Dhakla ... Distt. ...

जो कि मैं विक्रेता अराजा ...

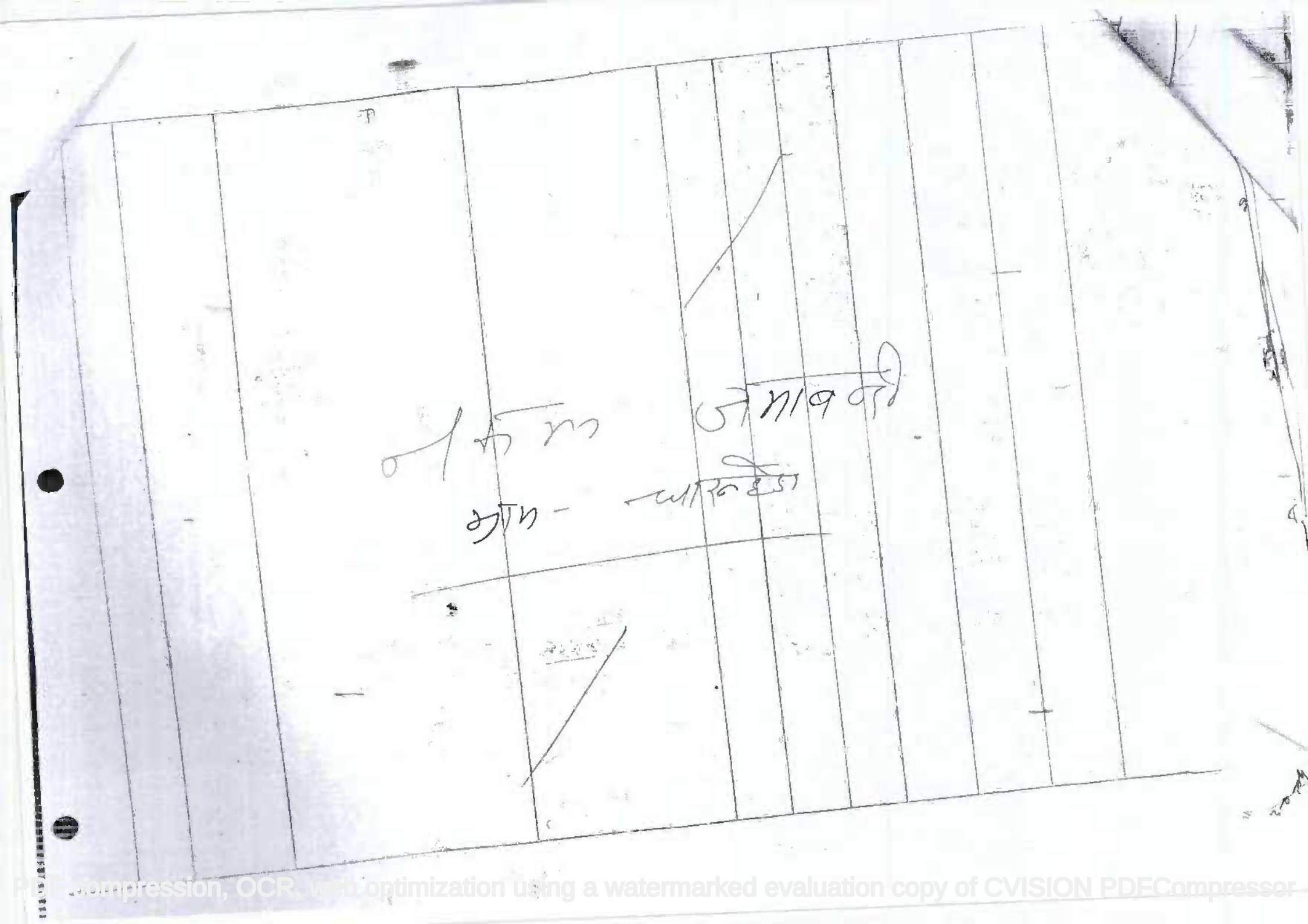
गाँव आसलवास(?)   तहसील रेवाड़ी   जिला रेवाड़ी   साल 2005

1	2	3	4	5	6	7	8	9	10	11	12
खेवट या जमाबन्दी नं.	खतौनी नम्बर	नाम तरफ या पत्ती और जमा सहित नम्बरदार का नाम	विवरण सहित मालिक का नाम	विवरण सहित काश्तकार का नाम	कुएं या सिंचाई के अन्य साधन का नाम	नम्बर खसरा या मुरब्बे और किले का नम्बर	रकबा और किस्म जमीन	दर और संख्या के ब्यौरे के साथ लगान जो मुजारा देता है	हिस्सा या हकीयत का पैमाना और बाछ का ढंग	माल और सिवाई के ब्यौरे सहित	अभ्युक्ति
411/375	441 मि०	प्रदीप आदि नम्बरदार चालू	हरगोविन्द पुत्र गिरधारी लाल पुत्र खड़मल वासी मसानी	खुदकाश्त व मकबूजा मालिक		68//21/1	3-12 चाही		कब्जा व परता जमाबन्दी [illegible] से एक	11-35 माल 7-32 सवाई 4-03	8444 बेच
						69//23/2	1-12 चाही				
						24	8-0 चाही				
						25	8-0 चाही				
						72//3	7-7 चाही				
						4	7-19 चाही				
						5	8-0 चाही				
						6	7-19 चाही				
						7	6-16 चाही				
						15	7-8 चाही				
						73//1	8-0 चाही				
						8/2/1	0-13 गैर[illegible]				
						11/1	0-5 चाही				
						9	8-0 चाही				
						10	8-0 चाही				
						कित्ता	91-11				

सोमानजी, नकल मुताबिक असल है। नकल गिरधारी पुत्र कालेराम वासी फतेहपुर [illegible] (तसदीकी) [illegible]

Kmsh [illegible] 10/1
...han Kumar Patwari
...cle Dharuhera
Teh & Distt Rewari

सनक [illegible] कि मैं विक्रेता अराजी जरइ खवट नम्बर [illegible] धारूहेड़ा जिला रेवाड़ी (हरियाणा) का हूँ [illegible] 16(5) [illegible] लिखा



फार्म नं० 15

रजिस्टर इन्तकाल

931—U.F.—H.G.P., E

नकल रजिस्टर इन्तकालात गांव खवासपेड़ा नं० हदबस्त 299 तहसील रेवाड़ी जिला रेवाड़ी वर्क नम्बर

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	इन्द्राज जमाबन्दी गुजस्ता या आखरी बाकी इन्तकाल जिसकी तरमीम मतलूब है							इन्द्राज जदीद जो अब कायम किया जाएगा						
नम्बरशुमार	नं० खाता जमाबन्दी साबिक	नाम तरफ या पट्टी	नाम मालक व अहवाल	नाम काश्तकार व अहवाल	नम्बर व नाम खेत व किता व किस्म जमीन	मामला या लगान	नम्बर खाता जमाबन्दी जदीद	नाम मालक व अहवाल	नाम काश्तकार व अहवाल	नम्बर व नाम खेत व किता व किस्म जमीन	मामला या लगान	किस्म या तारीख इन्तकाल मय व बाबत	फीस दाखल-खारज	रिपोर्ट पटवारी या तसदीक गिरदावर कानूनगो
8444	411/441		हरगोविन्द पुत्र गिरधारीलाल पुत्र रूड़मल वासी मसानी	जदस्तूर	68/21/1 3-12 चाही 69/23/2 1-12 चाही 24 8-0 चाही 25 8-0 चाही 72/3 7-7 चाही 4 7-19 चाही 5 8-0 चाही 6 7-19 चाही 7 6-16 चाही 15 7-8 चाही 73/1 8-0 चाही			आर्यमुद्रा फाईनेन्स [illegible] कार्यालय 1497 भारद्वाज भवन वजीर नगर कोटला मुबारिकपुर नई दिल्ली आदेश C.R.O. [illegible] बाबत [illegible] मन्जूर हो Sd/- AC IInd Grade 10/4/06	जदस्तूर	68/21/1 3-12 चाही 69/23/2 1-12 चाही 24 8-0 चाही 25 8-0 चाही 72/3 7-7 चाही 4 7-19 चाही 5 8-0 चाही 6 7-19 चाही 7 6-16 चाही 15 7-8 चाही 73/1 8-0 चाही		वाके रेहन रजिस्ट्री मुद्दा जमीका नं० 2 [illegible] 3-4-06 जदस्तूर [illegible] 944/0940/- [illegible] चालीस [illegible]	100/-	Sd पटवारी 7-4-06 Sd— F[illegible] 7-4-06 P.T.O

इस जगह [illegible] देवें कि आसानी से जमाबन्दी के साथ नत्थी हो सके।

Sr. No. 2388 Dated 27/3/06 (24/06

Certified Under Section 42 of the Indian Stamp Act, 1889.

That Stamp Duty of the amount of Rs. 10,12,050 —

(Rupees Ten Lac Twelve Thousand fifty +

has been levied on this document and paid by M/s Mudra finance Ltd Plot at 14,97 Bhardwaj Bhawan Wazirnagar Kotla Mubarikpur N. Delhi

vide treasury challan No. 4

Dated 25/3/06 for Sale deed 1,68,67,500 — ~~in favour~~

of

TREASURY OFFICER
CUM-COLLECTOR
GURGAON
27/3/06

बयनामा

1.	किस्म वसीका	बयनामा
2.	गांव / शहर का नाम	धारूहेड़ा
3.	रकबा	15 कनाल 12 मरला
4.	कवर्ड ऐरिया	कोई नहीं
5.	मालियति	मुब0 1,68,67,500 / — रूपये
6.	स्टाम्प मालियति	मुब0 10,12,050 / — रूपये
7.	सर्टिफिकेट नम्बर / दिनांक	2388 / 27.03.2006
8.	स्टाम्प कहां से खरीदा	खजाना गुडगांव
9.	कर्मशियल / रिहायशी / कृषी भूमि	कृषि भूमि
10.	एडवोकेट का नाम	एस.एस. यादव
11.	पृष्ठ संख्या / शब्द	01 / 350

मनके दीगम्बर सिंह पुत्र श्री गयालाल पुत्र श्री धर्म सिंह निवासी गांव धारूहेड़ा उप0 तह0 धारूहेड़ा, जिला रेवाडी (हरियाणा) का हूँ। जो कि मैं बिक्रेता अराजी जरई खेवट नम्बर — 555 खाता नम्बर — 606, मुस्ततील नम्बर 69, कीला नम्बर 15 / 2(7—12), 16(8—0), किता

प्रलेख न: 14

डीड सबंधी विवरण

दिनाँक 05/04/20

इ ड का नाम SALE OUTSIDE MC AREA

तहसील/सब-तहसील धारूहेडा

गांव/शहर Dharuhera

भवन का विवरण

स्थित GENERAL

चाही

भूमि का विवरण

1 Acre 5 Kanal 12 Marla

धन सबंधी विवरण

राशि 16,867,500.00 रुपये

स्टाम्प डयूटी की राशि 1,012,050.00 रु

रजिस्ट्रेशन फीस की राशि 500.00 रुपये

पेस्टिंग शुल्क 3.00 रुपये

Drafted By: S.S.Yadav

यह प्रलेख आज दिनाँक 05/04/2006 दिन बुधवार समय बजे श्री/श्रीमती/कुमारी पुत्र/पुत्री/पत्नी श्री/श्रीमती/कुमारी निवासी द्वारा पँजीकरण हेतु प्रस्तुत किया गया।

हस्ताक्षर

श्री Singh

उप/सयुंक्त पँजीयन अधिकारी
धारूहेडा

उपरोक्त विक्रेता व श्री/श्रीमती/कुमारी क्रेता हाजिर है। प्रस्तुत प्रलेख के तथ्यों को दोनो पक्षो ने सुनकर तथा समझकर स्वीकार किया। प्रलेख के अनुसार 10,120,500.00 रूपये की राशि क्रेता ने मेरे समक्ष विक्रेता को अदा की तथा प्रलेख मे वर्णित अग्रिम अदा की गई राशि के लेन देन को स्वीकार किया। दोनो पक्षो की पहचान श्री/श्रीमती/कुमारी S.S.Yadav Adv पुत्र/पुत्री/पत्नी श्री/श्रीमती/कुमारी निवासी GGN व श्री/श्रीमती/कुमारी Mahender Singh पुत्र/पुत्री/पत्नी श्री/श्रीमती/कुमारी Gayan Chand निवासी New Delhi ने की। साक्षी न: 1 को हम नम्बरदार/अधिवक्ता के रूप में जानते है तथा वह साक्षी न:2 को पहचान करता है।

दिनाँक 05/04/2006

उप/सयुंक्त पँजीयन अधिकारी
धारूहेडा (गुड़गाँव)

रकबा 15 कनाल 12 मरला सालम, वाका सिवाना मौजा धारूहेड़ा, उप–तह0 धारूहेड़ा, जिला रेवाड़ी (हरियाणा) का बरूवे फर्द जमाबंदी साल 2003 2004 की रूह से मालिक व काबिज हूँ। जो कि उपरोक्त अराजी रकबा ताहाल हर किस्म के भार से पाक व साफ है। यानि आज से पहले मुझ विक्रेता ने बाबत उपरोक्त अराजी किसी अन्य व्यक्ति के साथ कोई इकरारनामा बय ना किया हुआ है, ना ही किसी अन्य व्यक्ति को पट्टे पर व किराए पर दिया हुआ है, ना ही उपरोक्त अराजी पर मलकियत के झगड़े के सवाल पर किसी दिवानी अदालत व रिवैन्यू अद्दालत में कोई दावा विचाराधीन है, ना ही मुझ विक्रेता ने बावत उपरोक्त अराजी किसी अन्य व्यक्ति के नाम तबदील मलकियत बजरिये अदालत करा रखी है, ना ही उपरोक्त रकबा नीलाम व कुर्क शुदा है, ना ही किसी दीगर शक्स के हक में हिब्बे, डिक्री आदि की है, ना ही उपरोक्त अराजी सरपलस में है, और ना ही आज से पहले मुझ विक्रेता को बाबत उपरोक्त अराजी किसी भी एक्वीजिशन अथोरिटी से एक्वायरमैंट के नोटिस हांसिल हुए हैं। ना ही मुझ विक्रेता ने आज तक बाबत उपरोक्त अराजी कोई मुखत्यारे आम व मुखत्यारे खास मुंतकिल करने हेतु नियुक्त किया हुआ है। इस तरह से उपरोक्त अराजी रकबा हर तरह के भार से पाक व साफ है। मुझ विक्रेता को उपरोक्त अराजी को बेचने का पूरा–पूरा कानूनी हक हांसिल है। अब मुझ विक्रेता को अन्य तरक्की दीगर जायदाद व घरेलू खर्च वगैरा के लिए रूपयों की आवश्यकता है इसलिए आज अपने ठीक होश व हवास में बगैर किसी दबाव के अपनी मर्जी व खुशी से व अपनी शुद्ध बुद्धि व स्वेच्छा से तथा अपने सभी परिवारजनों की सहमति से रकबा मजकूराबाला 15 कनाल 12 मरला सालम, मय हकूक दाखिली व खारिजी व मय सर्व अधिकार सहित को बय बदले बिलमुक्ता मुब0 1,68,67,500/– रूपये (एक करोड अडसठ लाख सडसठ हजार पांच सौ रूपये रूपये) जिसके आधे मुब0 84,33,750/– रूपये (चौरासी लाख तैंतीस हजार सात सौ पचास रूपये) में बहक : मैसर्स मुद्रा फाईनेन्स लि0, रजि0 कार्यालय – 1497, भारद्वाज भवन, वजीर नगर, कोटला मुबारिकपुर, नई दिल्ली, बजरिये उनके डायेक्टर/अधिकृत हस्तक्षरकर्ता श्री मेहर चन्द तंवर (M/s Mudra Finance Ltd., Registered office at 1497, Bhardwaj Bhawan, Vazir Nagar, Kotla Mubarikpur, New Delhi, through its Director/ Authorised Signatory Mr. Mehar Chand Tanwar) को बय व फरोक्त

तई कर दी है। कुल जरे बय तमाम मुब0 1,68,67,500/– रूपये (एक करोड अडसठ लाख सडसठ हजार पांच सौ रूपये रूपये), में से मै विक्रेता मुब0 67,47,000/– रूपये (सड़सठ लाख सैतालीस हजार रूपये) बरूवे चैक नं0 473479 दिनांक 02.02.2006 जारीकर्ता सिंडिकेट बैक, फतेहपुर बेरी, नई दिल्ली, बरूवे एडवांस रसीद दिनांक 02.02.2006 मजकूर खरीदार कम्पनी बजरिये उनके डायरेक्टर/अधिकृत हस्ताक्षरकर्ता कंवर सिंह तंवर से पहले वसूल पा चुका हूँ। बाकी कुल जरे तमाम मुब0 1,01,20,500/– रूपये (एक करोड़ एक लाख बीस हजार पांच सौ रूपये) बावक्त रजिस्टरी बयनामा रोबरू श्रीमान सब रजिस्टार साहब बहादुर धारूहेड़ा, मजकूर खरीदार कम्पनी बजरिये उनके डायरेक्टर/अधिकृत हस्ताक्षरकर्ता से निम्न प्रकार से वसूल पाउंगा :–

मुब0 1,01,20,500/– रूपये (एक करोड़ एक लाख बीस हजार पांच सौ रूपये) बरूवे चैक नम्बर 473488 दिनांक 05.04.2006 जारीकर्ता सिंडिकेट बैक, असोला फतेहपुर बेरी, नई दिल्ली, बहक : दीगम्बर सिंह (विक्रेता)

अब मुझ विक्रेता का बाबत उपरोक्त विक्रित अराजी मजकूर खरीदार कम्पनी की तरफ कोई लेन देन बाकी नही रहा है। कब्जा मौके पर मजकूर खरीदार कम्पनी को विक्रित अराजी रकबा पर देकर पूर्ण रूप से अपने जैसा मालिक व काबिज बना दिया है। मजकूर खरीदार कम्पनी अराजी रकबा मुबईया को जिस तरह चाहे इस्तेमाल करे, कोई उजर व ऐतराज नही होगा। आज तक जो भी सरकारी व गैर सरकारी देनदारी उपरोक्त विक्रय अराजी रकबा पर होगी उन सबको चुकता करने की जिम्मेवारी मुझ विक्रेता की होगी और आज के बाद जो भी सरकारी व गैर सरकारी देनदारी उपरोक्त विक्रित अराजी रकबा पर होगी उन सबको चुकता करने की जिम्मेवारी मजकूर खरीदार कम्पनी की होगी। यह कि बाबत उपरोक्त विक्रित अराजी मै विक्रेता कागजात माल रिकार्ड में दाखिल खारिज दर्ज व मंजूर मजकूर खरीदार कम्पनी के नाम करा दूंगा अगर मै विक्रेता बाबत उपरोक्त विक्रय अराजी कागजात माल रिकार्ड में दाखिल खारिज दर्ज व मंजूर मजकूर खरीदार कम्पनी के नाम ना करा पाउं तो मजकूर खरीदार कम्पनी को हक हासिल होगा कि हजां दस्तावेज की रूह से कागजात माल रिकार्ड में दाखिल खारिज दर्ज व मंजूर अपने नाम करा लेवे जिसमें मुझ विक्रेता को किसी किस्म का कोई उजर व ऐतराज ना होगा। आज के बाद बाबत उपरोक्त विक्रित

अराजी से मुझ विक्रेता तथा मेरे कानूनी वारिसान का कोई हक व वास्ता किसी किस्म का ना होगा। मै विक्रेता और मेरे कानूनी वारिसान इस तहरीर के पाबन्द रहेगें। तमाम रजिस्टरी खर्चा यानि स्टाम्प डयूटी व रजिस्ट्रेशन फीस इत्यादि मजकूर खरीदार कम्पनी ने अपनी तरफ से खर्च किया है।

लिहाजा यह रजिस्टरी बयनामा खूब सोच, समझ कर, पढ कर, सुनकर हाजिरी गवाहान लिख दिया है कि सनद रहे ताकि आगे भविष्य में बावक्त जरूरत पड़े काम आवे।

तहरीर तारीख : 05.04.2006 R.No-2.

Sudhir Singh
S. S. YADAV
Advocate
District Court, Gurgaon

ड्राफ्टिड बजरिये : एस.एस. यादव, एडवोकेट, गुडगांव

बाया/विक्रेता :

दीगम्बर सिंह

खरीदार

मैसर्स मुद्रा फाईनेन्स लि0, रजि0 कार्यालय – 1497, भारद्वाज भवन, वजीर नगर, कोटला मुबारिकपुर, नई दिल्ली, बजरिये उनके डायेक्टर/अधिकृत हस्तक्षरकर्ता श्री मेहर चन्द तंवर (M/s Mudra Finance Ltd., Registered office at 1497, Bhardwaj Bhawan, Vazir Nagar, Kotla Mubarikpur, New Delhi, through its Director/ Authorised Signatory Mr. Mehar Chand Tanwar)

गवाह 1: Sudhir Singh
एस0 एस0 यादव, एडवोकेट
S. S. YADAV
गुड़गावां Advocate
District Court, Gurgaon

गवाह 2:
महेन्द्र सिंह पुत्र श्री ज्ञानचन्द
निवासी मकान न0 21, गांव
असोला फतेहपुर बेरी, नई दिल्ली

Reg. No.	Reg. Year	Book No.
14	2006-2007	1

विक्रेता

क्रेता

गवाह

विक्रेता Digamber Singh

क्रेता Maharchand Jamwar

गवाह :- S.S. Yadav Adv Mahender Singh

प्रमाण-पत्र

प्रमाणित किया जाता है कि यह प्रलेख कमाक 14 आज दिनाँक 05/04/2006 को बही नः 1 जिल्द नः2 प्रष्ठ नः 3 पर पैंजीकृत किया गया तथा इसकी एक प्रति अतिरिक्त बही सख्या 1 जल्द नः 2 के प्रष्ठ सख्या 26 से 29 पर चिपकाई गयी। यह भी प्रमाणित किया जाता है कि इस दस्तावेज के प्रस्तुतकर्ता और गवाहो ने अपने हस्ताक्षर/निशान अंगुठा— के सामने किये है ।

उपमण्डल अधिकारी (सिविल)
धारूहेड़ा

दिनाँक 05/04/2006

रसीद

मनके दीगम्बर सिंह पुत्र श्री गयालाल पुत्र श्री धर्म सिंह निवासी गांव धारूहेड़ा उप0 तह0 धारूहेड़ा, जिला रेवाडी (हरियाणा) का हूँ। जो कि मैं विक्रेता अराजी जरई खेवट नम्बर – 555 खाता नम्बर – 606, मुस्ततील नम्बर 69, कीला नम्बर 15/2(7–12), 16(8–0), किता 2 रकबा 15 कनाल 12 मरला सालम, वाका सिवाना मौजा धारूहेड़ा, उप–तह0 धारूहेड़ा, जिला रेवाड़ी (हरियाणा), बेचने का सौदा बय बदले मुब0 1,68,67,500/– रूपये (एक करोड अडसठ लाख सडसठ हजार पांच सौ रूपये रूपये) बहक : मैसर्स मुद्रा फाईनेन्स लि0, रजि0 कार्यालय – 1497, भारद्वाज भवन, वजीर नगर, कोटला मुबारिकपुर, नई दिल्ली, बजरिये उनके डायेक्टर/अधिकृत हस्तक्षरकर्ता श्री कंवर सिंह तंवर (M/s Mudra Finance Ltd., Registered office at 1497, Bhardwaj Bhawan, Vazir Nagar, Kotla Mubarikpur, New Delhi, through its Director/ Authorised Signatory Mr. Kanwar Singh Tanwar), के साथ किया है। जिसकी बाबत मुब0 67,47,000/– रूपये (सडसठ लाख सैतालीस हजार रूपये) बरूवे चैक नं0 473479 दिनांक 02.02.2006 जारीकर्ता सिंडिकेट बैक, फतेहपुर बेरी, नई दिल्ली द्वारा वसूल पा लिये है। और बाकी की रकम बावक्त रजिस्ट्री बयनामा वसूल पाउगा। रजिस्टरी बयनामा बाबत उपरोक्त अराजी मजकूर खरीदार कम्पनी या उनके रिप्रजेन्टेटिवज के नाम कराने की म्याद दिनांक 30.04.2006 तक करार पाई है। अतः यह रसीद बतौर एडवांस मैने बगैर किसी दीगर दबाव के लिख दी है कि सनद रहे और समय पर काम आवे। तहरीर तारीख : 02.02.2006

रसीदकर्ता
दीगम्बर सिंह

गवाह 1 Sube Singh
एस0 एस0 यादव, एडवोकेट
गुड़गाँव S. YADAV
Advocate
District Court, Gurgaon

गवाह 2
महेन्द्र सिंह पुत्र श्री ज्ञानचन्द
निवासी मकान न0 21, गांव
असोला फतेहपुर बेरी, नई दिल्ली

2386

d Under Section 42 of the Indian Stamp Act, 1889, that Stamp Duty of the ount of Rs. 5664660/- (Rupees Fifty Six Lac Sixty Four Thousand Six Hundered Sixty Only) has been levied on this document and paid by M/S MUDRA FINANCE LTD N-DELHI vide Treasury Challan No. 8 dated 24/3/06 for Sale deed 9,44,10,940/- ~~in favour of~~

TREASURY OFFICER
Treasury Officer
CUM-C Gurgaon
GURGAON.
24/3/06

बयनामा

1.	किस्म वसीका	बयनामा
2.	गांव/शहर का नाम	धारूहेड़ा
3.	रकबा	91 कनाल 11 ~~मरला~~
4.	कवर्ड ऐरिया	कोई नहीं
5.	मालियति	मुब0 9,44,10,940/- रूपये
6.	स्टाम्प **मालियति**	मुब0 56,64,660/- रूपये
7.	**सर्टिफिकेट** नम्बर/दिनांक	2386/24.03.2006
8.	**स्टाम्प कहां से** खरीदा	**खजाना** गुडगांव
9.	कर्मशियल/रिहायशी/कृषी भूमि	कृषि भूमि
10.	एडवोकेट का नाम	एस.एस. यादव
11.	पृष्ठ संख्या/शब्द	01/350

मनके हरगोविन्द पुत्र श्री गिरधारी लाल पुत्र श्री रूड़मल निवासी गांव मसानी, उप0 तह0 धारूहेड़ा, जिला रेवाडी हाल आबाद गांव धारूहेड़ा, उप0 तह0 धारूहेड़ा, जिला रेवाडी (हरियाणा) का हूँ। जो कि मैं विक्रेता अराजी जरई खेवट नम्बर – 411 खाता नम्बर – 441,

प्रलेख नः 2

डीड सबंधी विवरण

डीड का नाम SALE OUTSIDE MC AREA दिनाँक 03/04/2006

तहसील/सब-तहसील धारूहेडा गांव/शहर Dharuhera स्थित GENERAL

भवन का विवरण

चाही

भूमि का विवरण

11 Acre 3 Kanal 11 Marla

धन सबंधी विवरण

राशि 94,410,940.00 रुपये स्टाम्प ड्यूटी की राशि 5,664,660.00 रुपये

रजिस्ट्रेशन फीस की राशि 500.00 रुपये पेस्टिंग शुल्क 3.00 रुपये

Drafted By: SS Yadav Adv Ggn

यह प्रलेख आज दिनाँक 03/04/2006 दिन सोमवार समय बजे श्री/श्रीमती/कुमारी Hargovind पुत्र/पुत्री/पत्नी श्री/श्रीमती/कुमारी Girdhari Lal निवासी Dharuhera द्वारा पँजीकरण हेतु प्रस्तुत किया गया।

हस्ताक्षर प्रस्तुतकर्ता

श्री Hargovind

उप/सयुक्त पंजीयन अधिकारी
धारूहेडा

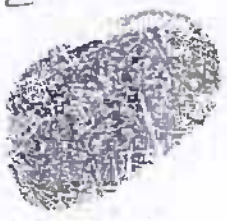
उपरोक्त विक्रेता व श्री/श्रीमती/कुमारी Mehar Chand Tanwar क्ता हाजिर है। प्रस्तुत प्रलेख के तथ्यो को दोनो पक्षो ने सुनकर तथा समझकर स्वीकार किया। प्रलेख के अनुसार 84,634,690.00 रूपये की राशि क्रेता ने मेरे समक्ष विक्रेता को अदा की तथा प्रलेख मे वर्णित अग्रिम अदा की गई राशि के लेन देन को स्वीकार किया।

दोनो पक्षो की पहचान श्री/श्रीमती/कुमारी SS Yadav Adv पुत्र/पुत्री/पत्नी श्री/श्रीमती/कुमारी - निवासी GGN व श्री/श्रीमती/कुमारी mahender Singh पुत्र/पुत्री/पत्नी श्री/श्रीमती/कुमारी Gyan Chand निवासी N Delhi ने की। साक्षी नः 1 को हम नम्बरदार/अधिवक्ता के रूप में जानते है तथा वह साक्षी नः2 की पहचान करता है।

दिनाँक 03/04/2006

उप/सयुक्त पंजीयन अधिकारी
धारूहेडा

मुस्तील नम्बर 68, कीला नम्बर – 21/1(3–12), व मुस्ततील नं0 69 कीला नं0 23/2(1–12), 24(8–0), 25(8–0), व मुस्ततील नं0 72 कीला नं0 3(7–7), 4(7–19) 5(8–0), 6(7–19), 7(6–16), 15(7–8) व मुस्ततील नं0 73 कीला नं0 1(8–0), 8/2/1(0–13), 11/1(0–5), 9(8–0), 10(8–0), कुल किता 15 रकबा 91 कनाल 11 मरला सालम यानि 11 एकड़ 3 कनाल 11 मरला, मय बिजली कनेक्शन, टयूबैल चालू हालत में, वाका सिवाना मौजा धारूहेड़ा, उप तह0 धारूहेड़ा, जिला रेवाड़ी (हरियाणा) का बरूवे फर्द जमाबंदी साल 2003–2004 की रूह से मालिक व काबिज हूँ। जो कि उपरोक्त अराजी रकबा ताहाल हर किस्म के भार से पाक व साफ है। यानि आज से पहले मुझ विक्रेता ने बाबत उपरोक्त अराजी किसी अन्य व्यक्ति के साथ कोई इकरारनामा बय ना किया हुआ है, ना ही किसी अन्य व्यक्ति को पट्टे पर व किराए पर दिया हुआ है, ना ही उपरोक्त अराजी पर मलकियत के झगड़े के सवाल पर किसी दिवानी अदालत व रिवैन्यू अदालत में कोई दावा विचाराधीन है, ना ही मुझ विक्रेता ने बाबत उपरोक्त अराजी किसी अन्य व्यक्ति के नाम तबदील मलकियत बजरिये अदालत करा रखी है, ना ही उपरोक्त रकबा नीलाम व कुर्क शुदा है, ना ही किसी दीगर शक्स के हक में हिब्बे, डिक्री आदि की है, ना ही मुझ विक्रेता ने आज तक बाबत उपरोक्त अराजी कोई मुखत्यारे आम व मुखत्यारे खास मुंतकिल करने हेतु नियुक्त किया हुआ है। इस तरह से उपरोक्त अराजी रकबा हर तरह के भार से पाक व साफ है। मुझ विक्रेता को उपरोक्त अराजी को बेचने का पूरा–पूरा कानूनी हक हांसिल है। अब मुझ विक्रेता को अन्य तरक्की दीगर जायदाद व घरेलू खर्च वगैरा के लिए रूपयों की आवश्यकता है इसलिए आज अपने ठीक होश व हवास में बगैर किसी दबाव के अपनी मर्जी व खुशी से व अपनी शुद्ध बुद्धि व स्वेच्छा से तथा अपने सभी परिवारजनों की सहमति से रकबा मजकूराबाला 91 कनाल 11 मरला सालम, मय बिजली कनेक्शन, टयूबैल चालू हालत मय हकूक दाखिली व खारिजी व मय सर्व अधिकार सहित



बदले बिलमुक्ता मुब0 9,44,10,940/– रूपये (नौ करोड़ चव.लीस लाख दस हजार
सौ चालीस रूपये) जिसके आधे मुब0 4,72,05,470/– रूपये (चार करोड़ बहत्तर लाख
पांच हजार चार सौ सत्तर रूपय) में बहक : मैसर्स मुद्रा फाईनेन्स लि0, रजि0 कार्यालय –
1497, भारद्वाज भवन, वजीर नगर कोटला मुबारिकपुर, नई दिल्ली, वजरिये उनके
डायेक्टर/अधिकृत हस्तक्षरकर्ता श्री मेहर चन्द तंवर (M/s Mudra Finance Ltd., Registered
office at 1497, Bhardwaj Bhawan, Vazir Nagar, Kotla Mubarikpur, New Delhi,
through its Director/ Authorised Signatory Mr. Mehar Chand Tanwar) को बय
व फरोक्त कतई कर दी है। कुल जरे बय तमाम मुब0 9,44,10,940/– रूपये (नौ करोड़
चवालीस लाख दस हजार नौ सौ चालीस रूपये), में से मै विक्रेता मुब0 97,76,250/–
रूपये (सतान्वे लाख छिहत्तर हजार दो सौ पचास रूपये) बरूवे चैक नं0 473480 दिनांक
02.02.2006 जारीकर्ता सिडिकेट बैक, फतेहपुर बेरी, नई दिल्ली, बरूवे इकरारनामा मुहायदा
दस दिनांक 06.02.2006 मजकूर खरीदार कम्पनी बजरिये उनके डायरेक्टर/अधिकृत
हस्ताक्षरकर्ता कंवर सिंह तंवर से पहले वसूल पा चुका हूँ। बाकी कुल जर तनाम मुब0
8,46,34,690/– रूपये (आठ करोड़ छियालीस लाख चौतीस हजार छः सौ नब्बे रूपये)
बावक्त रजिस्टरी बयनामा रोबरू श्रीमान सब रजिस्टार साहब बहादुर धारूहेड़ा, मजकूर
खरीदार कम्पनी बजरिये उनके डायरेक्टर/अधिकृत हस्ताक्षरकर्ता से निम्न प्रकार से वसूल
पाउंगा :–

मुब0 90,00,000/– रूपये (नब्बे लाख रूपये) बरूवे डी0 डी0 नम्बर 234312 दिनांक
03.04.2006 जारीकर्ता सिडीकेट बैक, असोला, फेतहपुर बेरी, नई
दिल्ली, बहक : हरगोविन्द (विक्रेता)

मुब0 90,00,000/– रूपये (नब्बे लाख रूपये) बरूवे डी0 डी0 नम्बर 234313 दिनांक
03.04.2006 जारीकर्ता सिडीकेट बैक, असोला, फेतहपुर बेरी, नई
दिल्ली, बहक : हरगोविन्द (विक्रेता)

मुब0 90,00,000/– रूपये (नब्बे लाख रूपये) बरूवे डी0 डी0 नम्बर 234314 दिनांक
03.04.2006 जारीकर्ता सिडीकेट बैक, असोला, फेतहपुर बेरी, नई
दिल्ली, बहक : हरगोविन्द (विक्रेता)

मुब0 90,00,000/- रूपये (नब्बे लाख रूपये) बरूवे डी0 डी0 नम्बर 234315 दिनांक 03.04.2006 जारीकर्ता सिडीकेट बैक, असोला, फेतहपुर बेरी, नई दिल्ली, बहक : हरगोविन्द (विक्रेता)

मुब0 90,00,000/- रूपये (नब्बे लाख रूपये) बरूवे डी0 डी0 नम्बर 234316 दिनांक 03.04.2006 जारीकर्ता सिडीकेट बैक, असोला, फेतहपुर बेरी, नई दिल्ली, बहक : हरगोविन्द (विक्रेता)

मुब0 90,00,000/- रूपये (नब्बे लाख रूपये) बरूवे डी0 डी0 नम्बर 234317 दिनांक 03.04.2006 जारीकर्ता सिडीकेट बैक, असोला, फेतहपुर बेरी, नई दिल्ली, बहक : हरगोविन्द (विक्रेता)

मुब0 90,00,000/- रूपये (नब्बे लाख रूपये) बरूवे डी0 डी0 नम्बर 234318 दिनांक 03.04.2006 जारीकर्ता सिडीकेट बैक, असोला, फेतहपुर बेरी, नई दिल्ली, बहक : हरगोविन्द (विक्रेता)

मुब0 90,00,000/- रूपये (नब्बे लाख रूपये) बरूवे डी0 डी0 नम्बर 234319 दिनांक 03.04.2006 जारीकर्ता सिडीकेट बैक, असोला, फेतहपुर बेरी, नई दिल्ली, बहक : हरगोविन्द (विक्रेता)

मुब0 90,00,000/- रूपये (नब्बे लाख रूपये) बरूवे डी0 डी0 नम्बर 234320 दिनांक 03.04.2006 जारीकर्ता सिडीकेट बैक, असोला, फेतहपुर बेरी, नई दिल्ली, बहक : हरगोविन्द (विक्रेता)

मुब0 36,34,690/- रूपये (छत्तीस लाख चौतीस हजार छः सौ नब्बे रूपये) बरूवे डी0 डी0 नम्बर 234321 दिनांक 03.04.2006 जारीकर्ता सिडीकेट बैक, असोला, फेतहपुर बेरी, नई दिल्ली, बहक : हरगोविन्द (विक्रेता)

अब मुझ विक्रेता का बाबत उपरोक्त विक्रित अराजी मजकूर खरीदार कम्पनी की तरफ कोई लेन देन बाकी नही रहा है। कब्जा मौके पर मजकूर खरीदार कम्पनी को विक्रित अराजी रकबा पर देकर पूर्ण रूप से अपने जैसा मालिक व काबिज बना दिया है। मजकूर खरीदार

कम्पनी अराजी रकबा मुबईया को जिस तरह चाहे इस्तेमाल करे, कोई उजर व ऐतराज नही होगा। आज तक जो भी सरकारी व गैर सरकारी देनदारी उपरोक्त विक्रय अराजी रकबा पर होगी उन सबको चुकता करने की जिम्मेवारी मुझ विक्रेता की होगी और आज के बाद जो भी सरकारी व गैर सरकारी देनदारी उपरोक्त विक्रित अराजी रकबा पर होगी उन सबको चुकता करने की जिम्मेवारी मजकूर खरीदार कम्पनी की होगी। यह कि उपरोक्त अराजी रकबे में जो बिजली कनेक्शन टयूबैल मेरे नाम से है, उस बिजली कनेक्शन टयूबैल को मजकूर खरीदार कम्पनी के नाम ट्रांस्फर करा दूंगा, अगर मै विक्रेता बिजली कनेक्शन टयूबैल को मजकूर खरीदार कम्पनी के नाम ट्रांस्फर ना करा पाउ तो मजकूर खरीदार कम्पनी हजा दस्तावेज की रूह से बिजली कनेक्शन टयूबैल को अपने नाम ट्रांस्फर करा लेवे, जिसमें मुझ विक्रेता को किसी किस्म का कोई उजर व एतराज न होगा। यह कि बावत उपरोक्त विक्रित अराजी मै विक्रेता कागजात माल रिकाड मे दाखिल खारिज दर्ज व मंजूर मजकूर खरीदार कम्पनी के नाम करा दूंगा अगर मै विक्रेता बाबत उपरोक्त विक्रय अराजी कागजात माल रिकार्ड में दाखिल खारिज दर्ज व मंजूर मजकूर खरीदार कम्पनी के नाम ना करा पाउं तो मजकूर खरीदार कम्पनी को हक हासिल होगा कि हजां दस्तावेजं की रूह से कागजात माल रिकार्ड में दाखिल खारिज दर्ज व मंजूर अपने नाम करा लेवे जिसमें मुझ विक्रेता को किसी किस्म का कोई उजर व ऐतराज ना होगा। आगे भविष्य में विक्रित अराजी रकबा मजकूरा बाला या इसका कोई हिस्सा किसी नुक्स कानूनी या मलकियत के सवाल पर कब्जा खरीदार कम्पनी से निकल जावेगा तो मै विक्रेता वापसी कुल जरे बय तमाम व मय हरजा वा खरचा व मय लागत की अदायगी का स्वयं जिम्मेवार रहूंगा। आज के बाद बाबत उपरोक्त विक्रित अराजी से मुझ विक्रेता तथा मेरे कानूनी वारिसान का कोई ताल्लुक व वास्ता किसी किस्म का ना होगा। मै विक्रेता और मेरे कानूनी वारिसान इस तहरीर के पाबन्द रहेगें। तमाम रजिस्टरी खर्चा यानि स्टाम्प ड्यूटी व रजिस्ट्रेशन फीस इत्यादि मजकूर खरीदार कम्पनी ने अपनी तरफ से खर्च किया है।

,रोक्त विक्रित अराजी से मुझ विक्रेता तथा मेरे कानूनी वारिसान
,स्ता किसी किस्म का ना होगा। मै विक्रेता और मेरे कानूनी वारिसान इस तहरीर क
पाबन्द रहेगें। तमाम रजिस्टरी खर्चा यानि स्टाम्प डयूटी व रजिस्ट्रेशन फीस इत्यादि मजकूर
खरीदार कम्पनी ने अपनी तरफ से खर्च किया है।

लिहाजा यह रजिस्टरी बयनामा खूब सोच, समझ कर, पढ कर, सुनकर हाजिरी गवाहान
किया है कि सनद रहे ताकि आगे भविष्य में बावक्त जरूरत पड़े काम आवे।

तहरीर

ड्राफ्टिड बजरिये : एस.एस. यादव, एडवोकेट, गुडगांव

Sube Singh
S. S. YADAV
Advocate
District Court, Gurgaon

खरीदार कम्पनी

For MUDRA FINANCE LTD.
DIRECTOR.

बाया / विक्रेता

L.T.I. हरगोविन्द

मैसर्स मुद्रा फाईनेन्स लि0, रजि0 कार्यालय – 1497, भारद्वाज भवन, वजीर नगर, कोटला मुबारिकपुर, नई दिल्ली, बजरिये उनके डायेक्टर / अधिकृत हस्ताक्षरकर्ता श्री मेहर चन्द तंवर (M/s Mudra Finance Ltd., Registered office at 1497, Bhardwaj Bhawan, Vazir Nagar, Kotla Mubarikpur, New Delhi, through its Director/ Authorised Signatory Mr. Mehar Chand Tanwar)

गवाह 1: Sube Singh
एस0 एस0 यादव, एडवोकेट,
गुड़गावां S. S. YADAV
Advocate
District Court, Gurgaon.

गवाह 2:
महेन्द्र सिंह पुत्र श्री ज्ञानचन्द निवासी
मकान नं0 21, गांव असोला, फतेहपुर
बेरी, नई दिल्ली।

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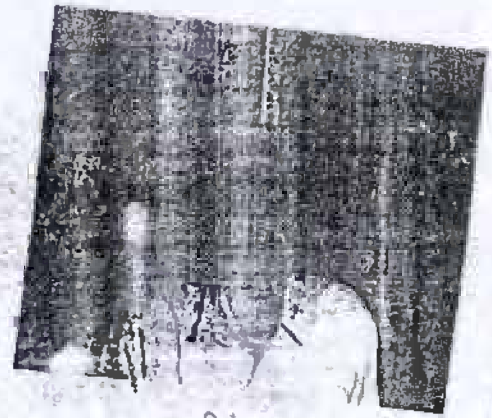


विक्रेता

क्रेता

गवाह

विक्रेता
Hargovind ______

क्रेता
Mehar Chand Tanwer ______ For MUDRA FIN... DIRECTOR

गवाह :- SS Yadav , Adv ______ mahender Singh ______

प्रमाणित किया जाता है कि निशान अंगूठा व दस्तखत हर दो फरीकेन वा गवाहान हमारे सामने कराये गये ।

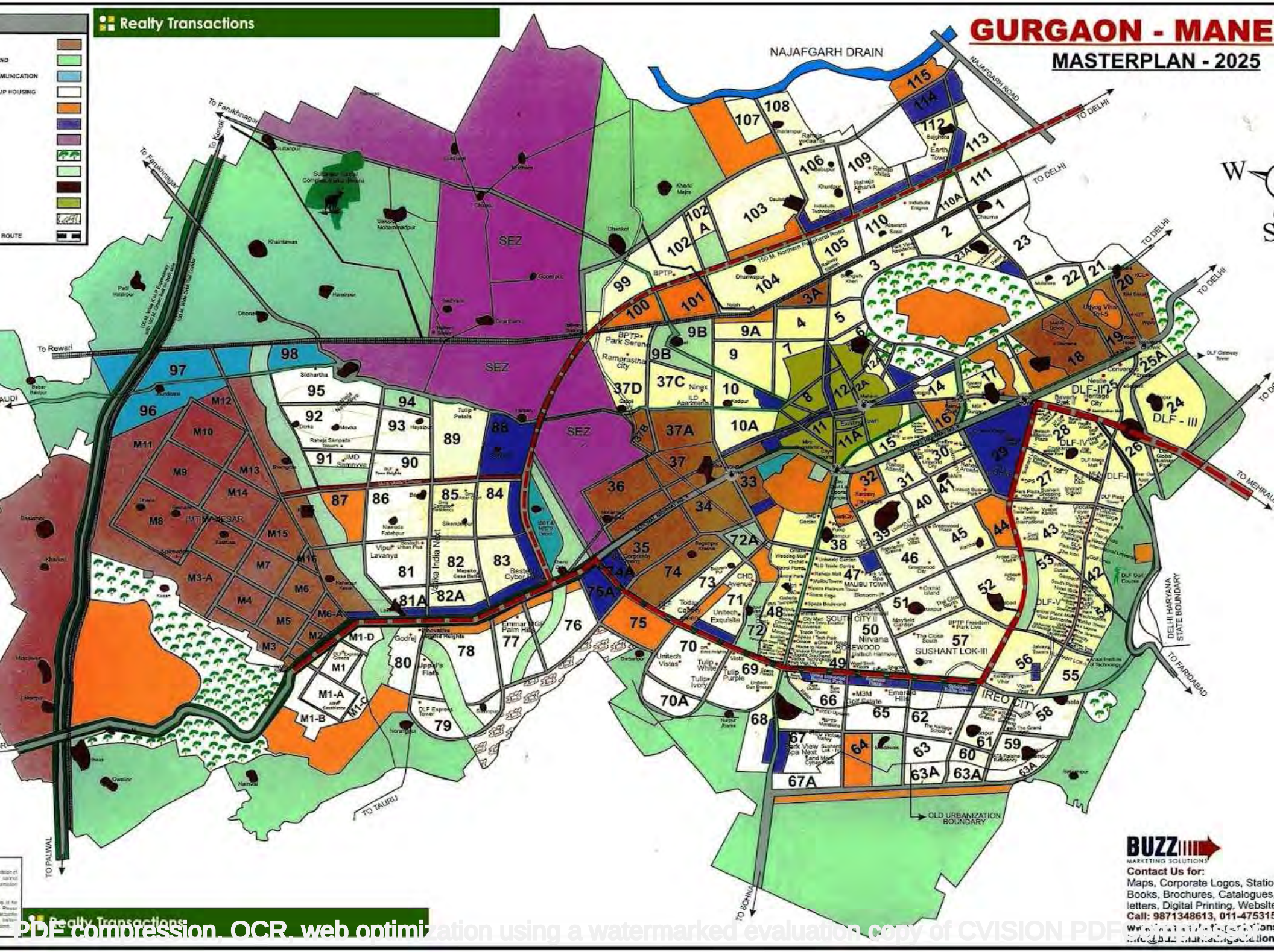
संयुक्त उप रजिस्ट्रार
धारूहेड़ा

प्रमाण-पत्र

...णित किया जाता है कि यह प्रलेख क्रमांक 2 आज दिनाँक 03/04/2006 को बही नः 1 जिल्द नः1 प्रष्ठ नः 200 पंजीकृत किया गया तथा इसकी एक प्रति अतिरिक्त बही सख्या 1 जिल्द नः 1 के प्रष्ठ सख्या 63 से 68 पर कार्ई गयी। यह भी प्रमाणित किया जाता है कि इस दस्तावेज के प्रस्तुतकर्ता और गवाहो ने अपने हस्ताक्षर/निशान अगुठा सामने किये है ।

दिनाँक 03/04/2006

संयुक्त उप रजिस्ट्रार
उप/संयुक्त पंजीयन अधिकारी
धारूहेड़ा



GEO-TECHNICAL INVESTIGATION REPORT

Project:

Proposed construction of group Housing Complex 'Vipul Garden' at Dharuhera, (Haryana)

Project Ref.:07050626

May - 2007

Report submitted to:

Vipul Limited
Global Arcade, 3rd Floor, Mehrauli - Gurgaon Road, Gurgaon 122002

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1.0 INTRODUCTION

1.1 Project Description

M/s Vipul Limited, Global Arcade, 3rd Floor, MG Road, Gurgaon is planning to construct its group housing complex **'Vipul Garden'** at Dharuhera (Haryana).

The client of the project has approached us for carrying out geo-technical investigations and recommendations about the design of suitable foundation for the structure of the proposed complex. We have carried out the investigations and testing accordingly and our report is submitted below:

1.2 Object of Investigations

To establish the parameters for the foundation design of the structure, various properties and parameters regarding the subsoil at site are required. These parameters are achieved through geo-technical investigations viz. soil profile, engineering properties & physical characteristics of the soil strata, variation in strength of soil strata etc. and can be elaborated as below:

- Sub-surface conditions which will reflect the thickness of the different soil strata
- Depth of ground water table
- Safe bearing capacity of the soil which will need the determination of various engineering properties of the soil strata at different levels
- Depth of the foundations
- Suitable type of foundations
- Requirement of any treatment needed to enhance the engineering properties of the soil beneath the footing

1.3 Scope of Investigations

For achieving the aforesaid objectives, the scope of work, as finalized by the consultant includes:

1. Making **three** Bore-holes upto **25m** depth and **One** borehole **15m** depth below existing ground surface in subsoil or refusal whichever is encountered earlier on the site at specified locations.

2. Conducting Standard Penetration Tests (S. P. T.) at 1.5 m depth interval.

3. Extracting disturbed & undisturbed soil sample at different depth interval.

4. Observing ground water table after a stabilization period of 24 hours.

5. Conducting laboratory tests on disturbed and undisturbed soil samples collected during the subsurface exploration.

6. Compiling and submitting report in three copies, containing field and laboratory tests results and suggestion & recommendations regarding type & depth of foundations and allowable load bearing capacity of soil and other desired parameters at various depths.

1.4 Organization of Report

This report has been primarily designed to explain the whole study in a systematic way, keeping in view the various demands of designers as well as the client. Each investigation is backed by its theoretical base and the results obtained either during the field tests or in laboratory are presented herein this report in self-explanatory tabular and/or graphical form. Calculations are shown wherever necessary before incorporating any parameter in the recommendations.

The chapter 'Introduction' describes the details of the project and various contents of this study. 'Site Reconnaissance' provides the general information regarding the site conditions, weather of the region, topography and the geology of the area. Details of various field and laboratory tests are given in the following two chapters. Findings obtained during these tests are summarized in the next chapter. 'Foundation Analysis' is an important chapter dealing with all design calculations required for the foundation selection and design. Recommendations are finalized in the concluding chapter.

Various table, figures and graphs are given in the appendices in quite an explanatory mode.

A list of Indian Standard (IS) Codes, which are referred throughout the study, is also attached at the end of this report.

2.0 SITE RECONNAISSANCE

2.1 General Geology of the Area

The present site is located at Dharuhera which falls in the Indo- Gangetic region of Haryana. The upper strata of this area comprise the alluvium, made up predominantly of sand and silt with some proportion of Gravel. These alluviums are underlain by harder formations of the system of rocks.

2.2 General Weather

The available data about the weather and average rainfall and location of the site indicate that there may not be variation in the ground water to affect the proposed structure and its foundation system.

2.3 Site Description

The proposed group housing complex is going to heve multistoreyed residential Towers and structure with double basement for parking with founding level at 1.50m and 7.00mdepth below EGL respectively.

At this site three boreholes of 25m depth were done at tower locations while 15.00m deep borehole was done at parking location.

Hence in this report, the foundation proposal has been given for both tyope of structures with founding level at 1.50m and 7.00m below EGL.

3.0 FIELD INVESTIGATION

3.1 Introduction

For achieving various soil parameters, Field Investigations are carried out at site. Field Investigation comprises site reconnaissance, detailed exploration including extensive boring program and conducting specified field tests viz. Standard Penetration Test.

3.2 Subsurface Exploration

Subsurface Exploration was carried out during 15th May to 24th May 2007. Bore-holes, as following designations were made on the site at locations specified by the client:

Bore-hole	Depth of exploration	Date of start	Date of completion
BH-2	25m	21-05-2007	24-05-2007
BH-5	15m	20-05-2007	21-05-2007
BH-7	25m	15-05-2007	17-05-2007
BH-9	25m	18-05-2007	20-05-2007

Disturbed and undisturbed samples were collected from bore- holes at various depths. The actual locations of these bore-hole locations are shown in 'Bore-hole Location Plan' (Fig.1 in the Annexure).

3.3 Standard Penetration Test

Standard Penetration Test conducted by means of the split spoon sampler furnishes data about resistance of the soils to penetration, which can be used to evaluate standard strength data, such as N values (number of blows per 30 cm of penetration using standard split spoon) of the soil.

Standard Penetration Tests were conducted in the boreholes at 1.5 m interval as per the provisions of IS 2131:1981. The tests were conducted by means of the split spoon sampler conforming to IS 9640:1980. If N values exceed 50 for 15cm penetration at any depth, it is taken as refusal depth and the bore-hole shall be terminated.

N values have been also utilized to establish the final shear parameters.

3.4 Ground Water Conditions

Water Table at this site was found at 13.50m depth below the existing ground surface.

4.0 LABORATORY INVESTIGATIONS

The laboratory tests to determine the physical properties, the engineering properties and the engineering characteristics of the soil were conducted in accordance with IS 2720. The tests performed are as follows.

4.1 Bulk Density and Natural Moisture Content

Undisturbed samples were collected from the boreholes in thin wall steel sample tubes by taking the dimensions and weight of these sample tubes, the bulk density of the soil is determined. Moisture content of the soil has been calculated by Oven Drying Method.

4.2 Grain Size Analysis

Grain size distribution of the soil is determined by sieving the soil sample in a set of IS sieves: 4.75 mm, 2 mm, 1 mm, 0.5 mm, 0.25 mm, 0.125 mm, 0.075 mm size. Grain Size Analysis curve has been plotted and attached in the appendices of this report for the soil samples collected from various depths of bore-holes.

4.3 Atterberg Limits

Atterberg Limits in the form of liquid limit, plastic limit and shrinkage limit are determined for the soil to establish its consistency. In the case of cohesionless soil, plastic limit is first determined and if it cannot be determined the soil sample is reported to be non-plastic.

4.4 Specific Gravity

Specific Gravity of the soil has been determined by Specific Gravity Bottle.

4.5 Direct Shear Test

Direct Shear Test is a strength test, which is performed on the soil sample to determine the value of angle of internal friction.
The direct shear test is generally conducted on cohesionless soil as consolidated drained (CD) test. In the present case the soil samples were prepared for various depths and were tested in the Direct Shear Apparatus under CD- condition.

4.6 Triaxial Shear Test

Triaxial Shear Test is a strength test, which is performed on the soil sample to determine the value of cohesion and angle of internal friction. In the present case, test samples were prepared from undisturbed samples and were tested in the Triaxial Apparatus.

Summary of Laboratory Tests results for all boreholes is shown in tabular form and the same is presented in the appendices of this report.

5.0 FINDINGS OF INVESTIGATIONS

Based on various field and laboratory tests, following findings are observed:

1. The general grain size distribution pattern in the bore-holes has been observed as following:

BH No.	Subsoil Layers	Soil Type	Gravel (%)	Sand (%)	Silt + Clay (%)
BH-2	Layer-1 (0.0 to 6.0m)	Silty Sand (SM)	0	58-76	24-42
	Layer-2 (6.0 to 10.0m)	Sandy Silt With Gravel (ML-CL)	2-7	30-33	62-68
	Layer-3 (10.0 to 25.0m)	Silty Sand With Gravel (SM)	1-8	50-71	28-46
BH-5	Layer-1 (0.0 to 6.0m)	Silty Sand (SM)	0-1	62-71	29-40
	Layer-2 (6.0 to 10.0m)	Sandy Silt With Gravel (ML-CL)	2-8	28-29	63-70
	Layer-3 (10.0 to 15.0m)	Silty Sand With Gravel (SM)	1-5	55-67	34-42
BH-7	Layer-1 (0.0 to 6.0m)	Silty Sand (SM)	0	57-86	14-43
	Layer-2 (6.0 to 10.0m)	Sandy Silt With Gravel (ML-CL)	3-9	29-40	55-68
	Layer-3 (10.0 to 25.0m)	Silty Sand With Gravel (SM)	1-13	50-79	19-43
BH-9	Layer-1 (0.0 to 6.0m)	Silty Sand (SM)	0-2	51-67	32-48
	Layer-2 (6.0 to 10.0m)	Sandy Silt With Gravel (ML-CL)	2-5	25-32	65-71
	Layer-3 (10.0 to 25.0m)	Silty Sand With Gravel (SM)	1-7	49-69	29-45

The grain size distribution pattern reveals that the subsurface strata comprise Sandy Silt and Silty Sand with Gravel.

2. Standard Penetration Test (SPT) results show the following pattern in bore-holes in different depth range:

Depth Below EGL	BH-2		BH-5		BH-7		BH-9	
	Nr	Nc	Nr	Nc	Nr	Nc	Nc	Nr
1.50 m	9	13	7	10	14	20	12	17
3.00 m	16	20	11	13	16	20	16	20
4.50 m	20	22	19	21	13	14	19	21
6.00 m	23	23	23	23	29	29	24	24
7.50 m	27	25	29	27	22	20	13	12
9.00 m	33	28	33	28	31	26	16	14
10.50 m	32	26	29	23	43	34	30	24
12.00 m	40	30	38	29	34	26	69	52
13.50 m	38	27	41	23	36	28	15	11
15.00 m	12	8	43	23	35	25	34	24
18.00 m	30	20	-	-	34	23	32	22
21.00 m	35	23	-	-	40	26	38	25
24.55 m	38	23	-	-	61	38	55	34

Nc the Corracted value of recorded Nr is obtained after applying correction of overburden and dilatancy.

SPT results indicate that the nature of subsoil is medium dense to dense throughout the explored depth.

3. Water table was found at 13.50 m below EGL.

4. The soil throughout the explored strata has been found of medium plastic to Non - Plastic in nature.

5. The variation of bulk density, natural moisture content and dry density for various depth range is found to follow the following pattern:

BH No.	Bulk Density (gm/cc)	Natural Moisture Content (%)	Dry Density (gm/ cc)
BH-2	1.70-1.83	10.40-14.90	1.54-1.59
BH-5	1.71-1.79	10.24-12.90	1.56-1.59
BH-7	1.72-1.83	10.02-14.80	1.56-1.60
BH-9	1.73-1.84	10.60-14.95	1.56-1.59

6. The values of ϕ through out the explored depth are found to follow the following pattern:

BH No.	Subsoil Layers	Cohesion 'c' (t/m²)	ϕ (degrees)
BH-2	Layer-1 (0.0 to 6.0m)	0.08-0.10	30-31
	Layer-2 (6.0 to 10.0m)	0.23	30
	Layer-3 (10.0 to 25.0m)	0.03-0.13	30-31
BH-5	Layer-1 (0.0 to 6.0m)	0.03-0.10	30-31
	Layer-2 (6.0 to 10.0m)	0.25	30
	Layer-3 (10.0 to 15.0m)	0.05-0.11	30-31
BH-7	Layer-1 (0.0 to 6.0m)	0.02-0.04	31
	Layer-2 (6.0 to 10.0m)	0.24	30
	Layer-3 (10.0 to 25.0m)	0.02-0.13	30-31
BH-9	Layer-1 (0.0 to 6.0m)	0.02-0.14	30-31
	Layer-2 (6.0 to 10.0m)	0.25	30
	Leyer-3 (10.0 to 25.0m)	0.03-0.13	30-31

Inference of Findings:

From the above findings it can be inferred that the subsoil strata at founding level of 1.5m and 7.00m below the existing ground surface is silty sand and Sandy Silt with Gravel respectively. Correction factors for overburden and dilatancy has been applied to field SPT values, for the entire explored depth. Corrected SPT value have been used for the calculation of safe bearing pressure values from the settlement criterion as per IS:8009, Part-I. Following general design soil parameters at founding level have been taken for the analysis purpose:

Foundlng Level below EGL	Soil Type	Bulk Density	N Value	c	ϕ
1.50m	Silty Sand	1.70 t/m³	15	0.10 t/m²	30°
7.00m	Sandy Silt with Gravel	1.74 t/m³	15	0.20 t/m²	30°

6.0 FOUNDATION ANALYSIS

6.1 Foundation Type

A Foundation is required for distributing the loads of the superstructure on a larger ground area. The dead and live load of the proposed structure are to be transferred to the underlying supporting soil through suitable foundation.

Foundation may be broadly classified into two categories: i) Shallow Foundation and ii) Deep Foundation.

6.2 Shallow Foundation

Shallow foundation transmits the loads to the strata at shallow depth. A shallow foundation is one the width of which is greater than its depth. Shallow Foundations are located just below the lowest part of the wall or a column, which they support.

6.3 Deep Foundation

When the soil at or near the ground surface is not capable of supporting a structure, deep foundations are required to transfer the loads to deeper strata. Deep foundations are, therefore, used when surface soil is unsuitable for shallow foundation, and a firm stratum is so deep that it cannot be reached economically by shallow foundations. The most common types of deep foundations are piles, wells and caissons.

6.4 Determination of Bearing Capacity for the Shallow Foundations

Bearing capacity of soil for foundation has been calculated in accordance with IS: 6403 –1981. Here Allowable bearing pressure has been evaluated by: (a) Shear Failure criterion and (b) Settlement criterion taking SPT values.

(a) Shear Failure criterion

$$q_a = \frac{1}{F}\left[c\, N_c S_c d_c i_c + \gamma\, D_f (Nq-1) Sq\, dq\, iq + 0.5\, \gamma B N_\gamma S_\gamma d_\gamma i_\gamma W' \right]$$

Here q_a = Allowable Bearing Capacity

F = Factor of safety, taken equal to 3.0 as per IS: 1904

c = Cohesion

γ	= Unit weight of soil
W'	= Water table correction factor
D_f	= Depth of foundation
8	= Width of foundation
N_c, Nq , N_γ	= 8earing Capacity factors
S_c, Sq , S_γ, d_c, dq, d_γ	= Shape Factors and Depth Factor
I_c, iq , I_γ	= Inclination Factor

For various values of Df & B, calculations are done and the values for net safe bearing capacity have been obtained.

Founding Level Below EGL	Type of Foundation	Size/Width of Foundation	$q_{net\ safe}$ (t / m²)
1.50m	Isolated Strip	2.00m	11.12
		2.50m	11.53
	Isolated Square	2.50m X 2.50m	12.55
		3.00m X 3.00m	12.88
	Raft	>6.00m	15.43
7.00m	Isolated Square	2.50m X 2.50m	13.77
		3.00m X 3.00m	14.08
	Raft	>6.00m	16.62

(b) Settlement criterion taking SPT values.

As per IS: 8009-1976 Part-I- Clause-9.1.4, the settlement for different width has been computed. For the allowable total settlement of 50mm for isolated footing and 65mm for Raft foundation (as per IS: 1904), the safe bearing pressure is found as following:

Founding Level Below EGL	Type of Foundation	Size/Width of Foundation	Safe Bearing Pressure (t / m²)
1.50m	Isolated Strip	2.00m	18.52
		2.50m	16.67
	Isolated Square	2.50m X 2.50m	18.94
		3.00m X 3.00m	17.51
	Raft	>6.00m	17.82
7.00m	Isolated Square	2.50m X 2.50m	18.17
		3.00m X 3.00m	16.91
	Raft	>6.00m	17.82

Hence the values of net allowable bearing capacity as chosen the minimum value (rounded off) from above two criterion are as following:

Founding Level Below EGL	Type of Foundation	Size / Width of Foundation	$q_{net\ safe}$ (t / m²)	q_{gross} (t / m²)
1.50m	Isolated Strip	2.00m	11.00	-
		2.50m	11.50	-
	Isolated Square	2.50m X 2.50m	12.50	-
		3.00m X 3.00m	12.75	-
	Raft	>6.00m	15.00	-
7.00m	Isolated Square	2.50m X 2.50m	13.50	25.50
		3.00m X 3.00m	14.00	26.00
	Raft	>6.00m	16.50	28.50

The gross safe bearing capacity has been calculated by adding the effective overburden pressure due to the presence of soil before excavation for the basement [=y*(Depth of Founding Level) = 1.72*(7.0) = 12.04 ~ 12.00 t / m² for 7.0m founding level below EGL].

6.5 Modulus of Subgrade Reaction

Modulus of Subgrade Reaction (k) is required for the design of Raft foundation. In the field the method for the determination of its value is conducting 'Plate Load Test' on a 30cm or 60cm plate. Values obtained from this test are corrected for the actual foundation size, which becomes unrealistic when the foundation size is too large.

Keeping in view the technical limitations of the plate load test for the assessment of modulus of subgrade reaction, we have referred and Incorporated the recommendations of 'Foundation Analysis and Design, Fifth Edition' by Joseph E. Bowles for calculating the value of k from the allowable bearing capacity as determined from the Geo-technical investigations.

For all the practical purposes, Bowles has suggested the value of subgrade reaction to be taken as 40 times the allowable net bearing capacity value in t/m³ for a permissible settlement of 60mm.

Similar value of Modulus of Subgrade Reaction (k) is obtained as per the guidelines given in the clause 3.1 (f) of IS:2950 (Part-I) – 1981.

6.6 Selection of Foundation

Selection of suitable type of foundation for the proposed structure depends upon the (i) intensity & type of loading to be transferred from the superstructure and (ii) the properties & behavior of sub soil.

In the present case, the structures are of residential tower, which are likely to transfer moderate loed on the subsoil. The bearing capacity of the natural subsoil is adequate enough to bear the expected moderate load of the proposed structures. Hence shallow foundation can be considered as the right solution for this project.

If the structural Consultants feels that the allowable bearing capacity for the open foundation may not be sufficient to support the desired tower structure safely, pile foundation can be provided . Hence in such condition the Bored Cast in situ under – reamed (single ream) Pile may be provided with load carrying capacity of the pile as determined below.

6.7 Design of Piles

The safe axiel load carrying capacity of Bored Cast in situ under – reamed (single ream) Pile has been calculated as per IS:2911 (Part – III) – 1980 and tabulated below:

Pile Diameter	Safe Axial Load Carrying Capacity		
	Effective pile length = 5.00m	*Effective pile length = 7.00m*	*Effective pile length = 9.00m*
300mm	20	30	40
400mm	30	45	50
500mm	50	70	80

6.8 Assessment of Liquefaction

Liquefaction is the sudden loss of shear strength of the loose fine-grained sands due to earthquake-induced vibration under saturated conditions. The liquefaction generally takes place in saturated loose fine-grained sand with N value less than 15.

From the geotechnical investigation carried out at this site , it is observed that the subsoil strata upto the explored depth is sandy silt and silty sand. Hence the soil constituting the foundation media of the proposed structures on this site may not possibly susceptible to liquefaction.

7.0 RECOMMENDATIONS

In view of the these findings & results obtained during the field and laboratory investigations end the analysis carried out thereafter, following general recommendations are being made for the foundation design of group housing complex **'Vipul Garden'** at Dharuhera (Haryana).

1. The type of foundation depends upon the configuration of loading & loading intensity as well as characteristics & behavior of subsoil. Considering the type of loading and based on various findings of the subsoil, in the present case, the type of foundation can be adopted as Isolated / Raft Foundation.

2. Allowable Bearing Capacity shall be adopted corresponding to various parameters as following:

Founding Level Below EGL	Type of Foundation	Size / Width of Foundation	$q_{net\ safe}$ (t / m²)	q_{gross} (t / m²)
1.50m	Isolated Strip	2.00m	11.00	-
		2.50m	11.50	-
	Isolated Square	2.50m X 2.50m	12.50	-
		3.00m X 3.00m	12.75	-
	Raft	>6.00m	15.00	-
7.00m	Isolated Square	2.50m X 2.50m	13.50	25.50
		3.00m X 3.00m	14.00	26.00
	Raft	>6.00m	18.50	28.50

3. For the design of Raft, value of Modulus of Subgrada Reaction (k) shall be taken as following:

Founding level below EGL	Soil Characteristic		Modulus of Subgrade Reaction (k) in KN/m³
	Relative Density	State of soil	
1.50m	Medium dense, Low -Plastic	Dry	6000
7.00m	Medium dense, Low -Plastic	Dry	6000

4. If the structural Consultant finds that the above values of bearing capacity may not be sufficient to support the required structure, the Bored Cast in situ under – reamed (single ream) Pile may be provided with load carrying capacity of the pile as given below :

Pile Diameter	Safe Axial Load Carrying Capacity		
	Effective pile length = 5.00m	*Effective pile length = 7.00m*	*Effective pile length = 9.00m*
300mm	20	30	40
400mm	30	45	50
500mm	50	70	80

5. If any loose pockets are observed during excavation for shallow foundation, the same shall be filled with brickbats/gravel and compacted. Foundation can subsequently be placed over this prepared surface.

6. If the design parameters corresponding to any other foundation size or depth are required, the matter may be please referred back to us.

7. Our analysis and recommendations are based only on the data collected from Four boreholes conducted on the site. Subsoil strata observed in these bore- holes have been assumed as the representative of whole site.

For **Explore Engineering Consultants Private Limited**

Date : 30 / 05 / 2007
Place: Noida

(A.K.SINGH) (A.P.SINGH)

ANNEXURES

SITE PLAN SHOWING BORE HOLE LOCATIONS

Details of
BH-2

FIELD BORELOG

Table No.- 1

METHOD OF BORING	: Shell & Auger	BORE HOLE NO.	: 2
CASING TYPE & DEPTH	: SX-6, 25m	LOCATION	: As per attached location plan
WATER TABLE	: 13.50m	DATE START	: 21-05-2007
DEPTH OF BORING	: 25 m Below EGL	DATE COMPLETION	: 24-05-2007

DEPTH(m) below EGL	DISCRIPTION OF SOIL STRATA	SOIL CLASSIFICATION	LEGEND	STRATA THICKNESS (m)	SAMPLES DETAILS			SPT BLOWS COUNTS				REMARKS
					TYPE	NO.	TEST DEPTH (m) below EGL	15	30	45	"N"	
1.0	SILTY SAND	SM		6.00	DS							
2.0					UDS	1	1.00-1.30	COLLECTED				
					SPT	1	1.50-1.95	3	4	5	9	
3.0												
4.0					SPT	2	3.00-3.45	4	7	9	16	
5.0					UDS	2	4.00-4.30	COLLECTED				
					SPT	3	4.50-4.95	6	7	13	20	
6.0												
7.0	SANDY SILT	ML-CL		4.00	SPT	4	6.00-6.45	5	9	14	23	
					UDS	3	7.00-7.30	COLLECTED				
8.0					SPT	5	7.50-7.95	7	11	16	27	
9.0												
10.0					SPT	6	9.00-9.45	9	16	17	33	
11.0	SILTY SAND WITH GRAVEL	SM		15.00	UDS	4	10.00-10.30	COLLECTED				
					SPT	7	10.50-10.95	7	13	19	32	
12.0												
13.0					SPT	8	12.00-12.45	10	16	24	40	
					UDS	5	13.00-13.30	COLLECTED				
14.0					SPT	9	13.50-13.95	12	17	21	38	
15.0												
16.0					SPT	10	15.00-15.45	4	5	7	12	
					UDS	6	16.00-16.30	COLLECTED				
17.0												
18.0					SPT	11	18.00-18.45	10	13	17	30	
19.0					UDS	7	19.00-19.30	COLLECTED				
20.0												
21.0												
22.0					SPT	12	21.00-21.45	9	15	20	35	
					UDS	8	22.00-22.30	COLLECTED				
23.0												
24.0												
25.0					SPT	13	24.55-25.00	10	17	21	38	

ABBREVIATION:- SPT - Standard Penetration Test UDS- Undisturbed Sample

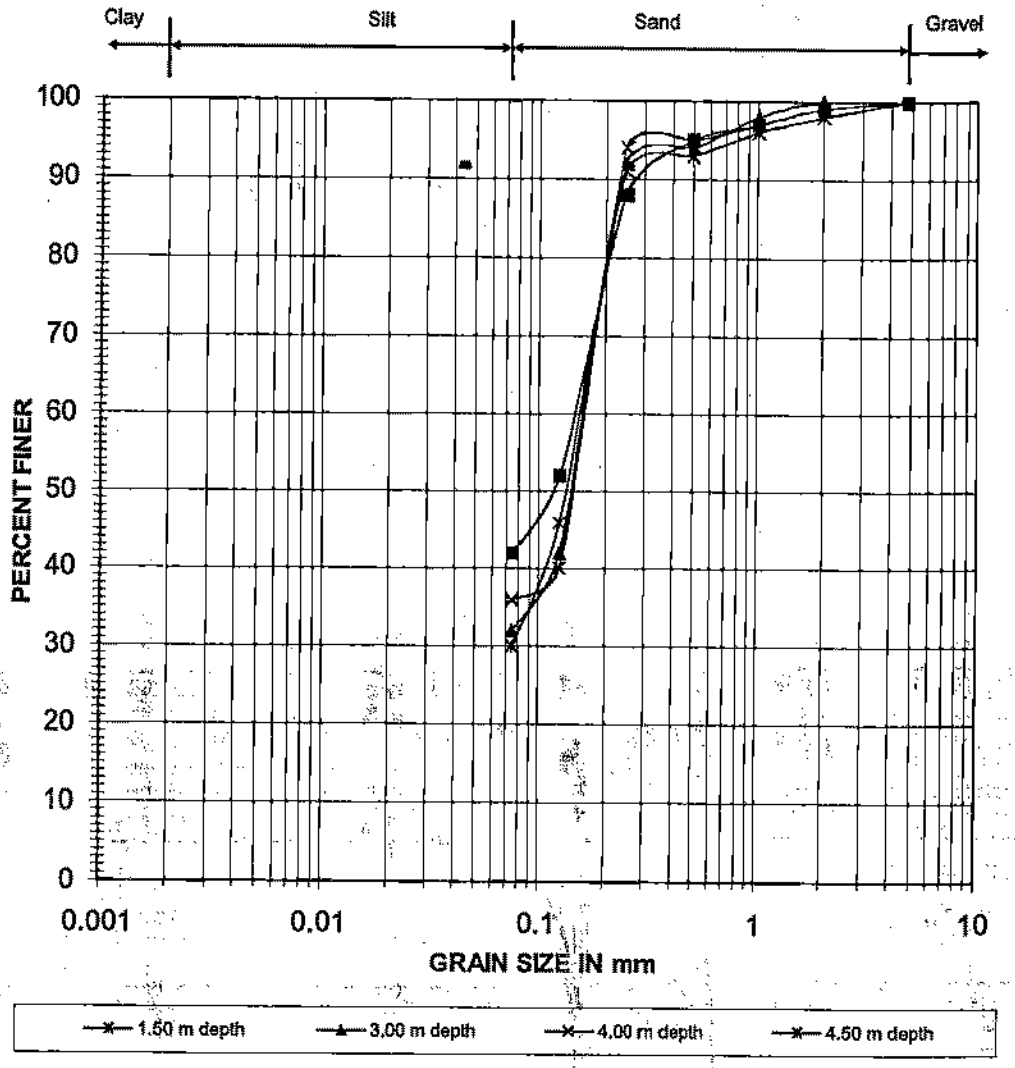
LABORATORY TEST RESULTS OF BH-2

Table No.-2

DEPTH BELOW EGL	TYPE / SAMPLE NO.	DEPTH OF SAMPLE BELOW EGL	SPT VALUE 'N' OBSERVED	SPT VALUE 'N' CORRECTED	DESCRIPTION OF STRATA	LEGEND	GRAIN SIZE ANALYSIS GRAVEL (%)	GRAIN SIZE ANALYSIS SAND (%)	GRAIN SIZE ANALYSIS SILT + CLAY (%)	ATTERBERG LIMIT LIQUID LIMIT (%)	ATTERBERG LIMIT PLASTIC LIMIT (%)	ATTERBERG LIMIT PLASTICITY INDEX	BULK DENSITY in t/m³	DRY DENSITY in t/m3	MOISTURE CONTENT (%)	SPECIFIC GRAVITY	SHEAR PARAMETER COHESION 'C' in t/m²	SHEAR PARAMETER ANGLE of FRICTION
	DS	0.00-0.50			SILTY SAND (SM)		0	76	24									
1.00																		
	UDS	1.00-1.30	COLLECTED				0	59	41	24	20	4	1.70	1.54	10.40	2.66	0.10	30
2.00	SPT	1.50-1.95	9	13			0	58	42									
3.00																		
	SPT	3.00-3.45	16	20			0	68	32									
4.00																		
	UDS	4.00-4.30	COLLECTED				0	64	36	NON-PLASTIC			1.72	1.55	10.85	2.65	0.08	31
5.00	SPT	4.50-4.95	20	22			0	70	30									
6.00																		
	SPT	6.00-6.45	23	23	SANDY SILT (ML-CL)		7	31	62									
7.00																		
	UDS	7.00-7.30	COLLECTED				4	30	66	26	20	6	1.74	1.56	11.75	2.67	0.23	30
8.00	SPT	7.50-7.95	27	25			2	30	68									
9.00																		
	SPT	9.00-9.45	33	28			5	33	62									
10.00																		
	UDS	10.00-10.30	COLLECTED		SILTY SAND WITH GRAVEL (SM)		1	59	40	24	20	4	1.75	1.56	12.10	2.66	0.10	30
11.00	SPT	10.50-10.95	32	26			3	55	42									
12.00																		
	SPT	12.00-12.45	40	30			2	55	43									
13.00																		
	UDS	13.00-13.30	COLLECTED				1	71	28	NON-PLASTIC			1.78	1.58	12.60	2.65	0.03	31
14.00	SPT	13.50-13.95	38	27			3	63	34									
15.00																		
	SPT	15.00-15.45	12	8			3	63	34									
16.00																		
	UDS	16.00-16.30	COLLECTED				5	55	40	24	20	4	1.80	1.57	14.60	2.66	0.10	30
17.00																		
18.00	SPT	18.00-18.45	30	20			2	57	41									
19.00																		
	UDS	19.00-19.30	COLLECTED				4	50	46	24	20	4	1.82	1.59	14.75	2.66	0.13	30
20.00																		
21.00	SPT	21.00-21.45	35	23			6	63	31									
22.00																		
	UDS	22.00-22.30	COLLECTED				3	57	40	24	20	4	1.83	1.59	14.90	2.66	0.10	30
23.00																		
24.00																		
25.00	SPT	24.55-25.00	38	23			8	54	38									

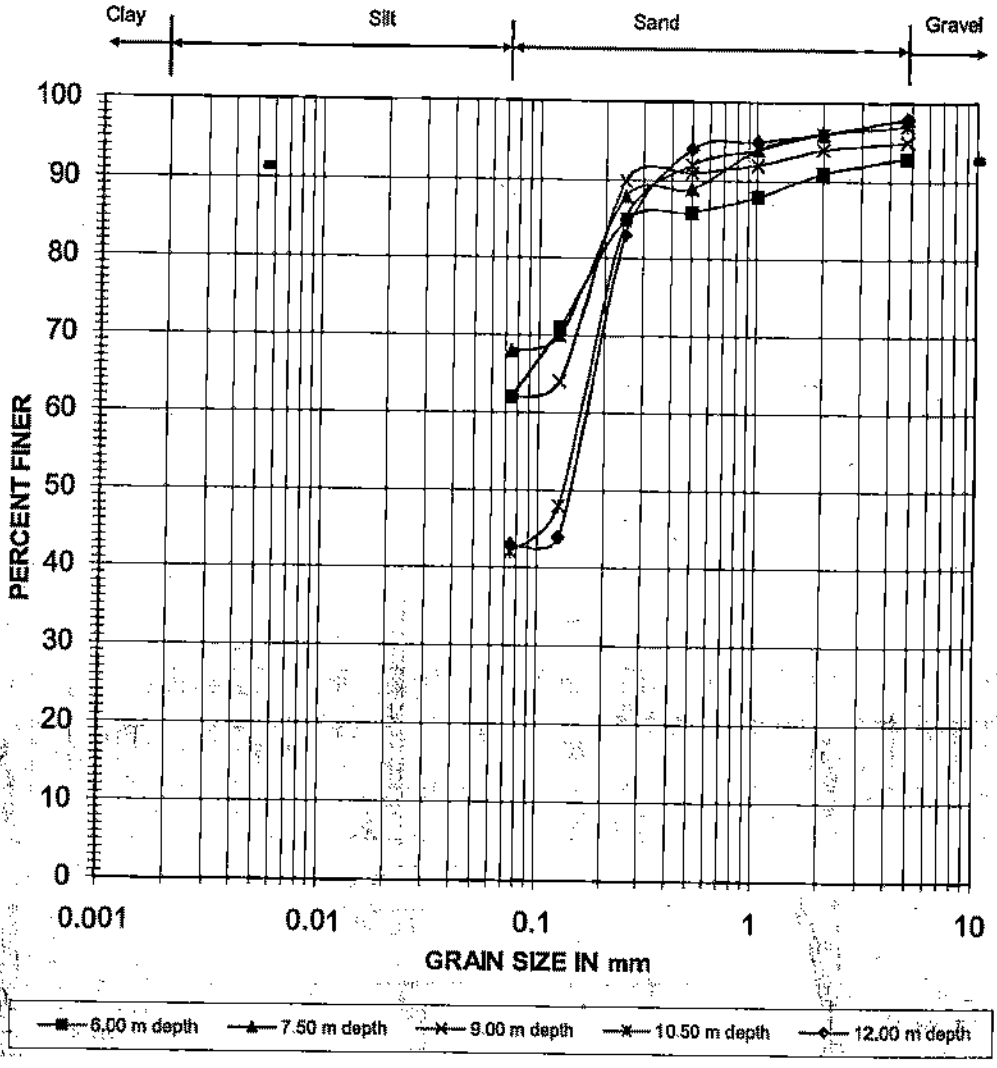
EGL = Existing Ground Level

PARTICLE SIZE DISTRIBUTION CURVE for BH-2



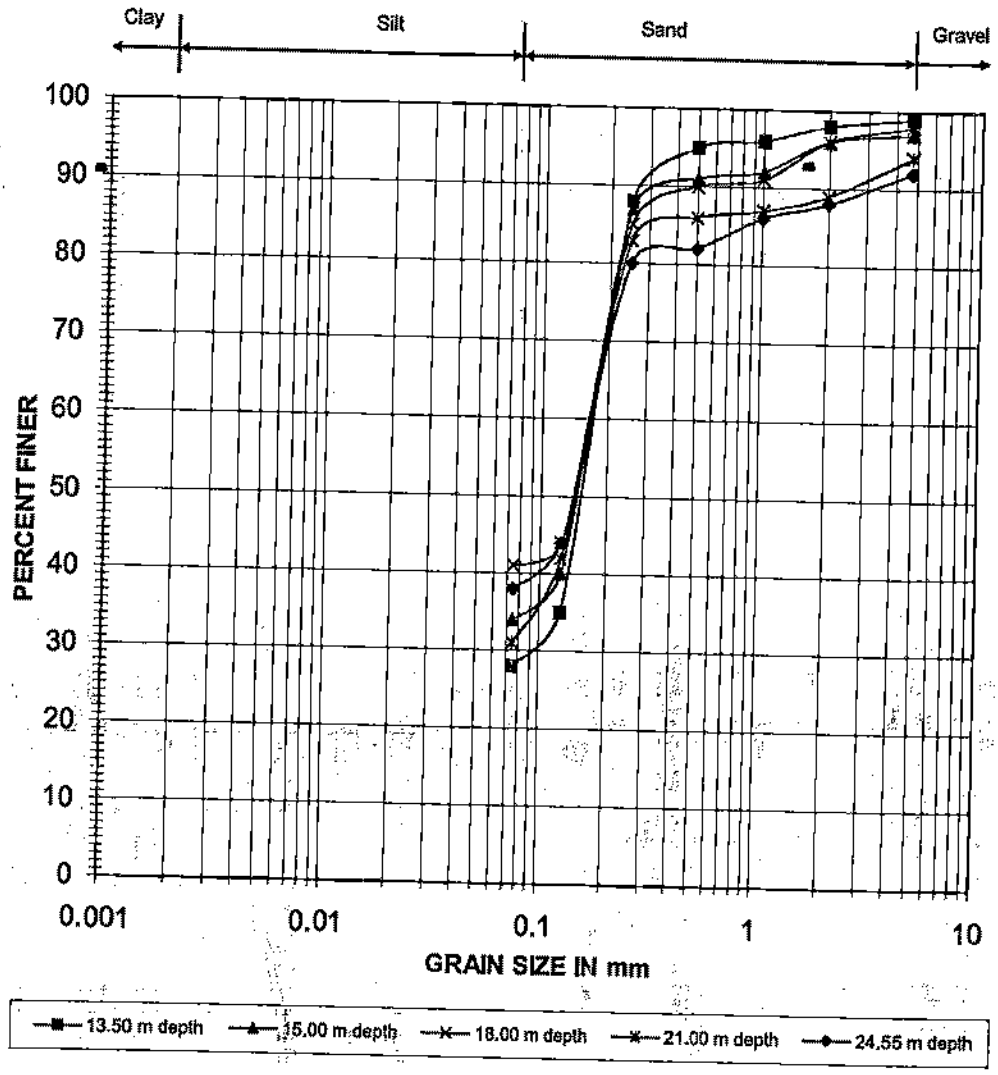
Depth	Gravel (%)	Sand (%)	Silt + Clay (%)
1.50 m depth	0	58	42
3.00 m depth	0	68	32
4.00 m depth	0	64	36
4.50 m depth	0	70	30

PARTICLE SIZE DISTRIBUTION CURVE for BH-2



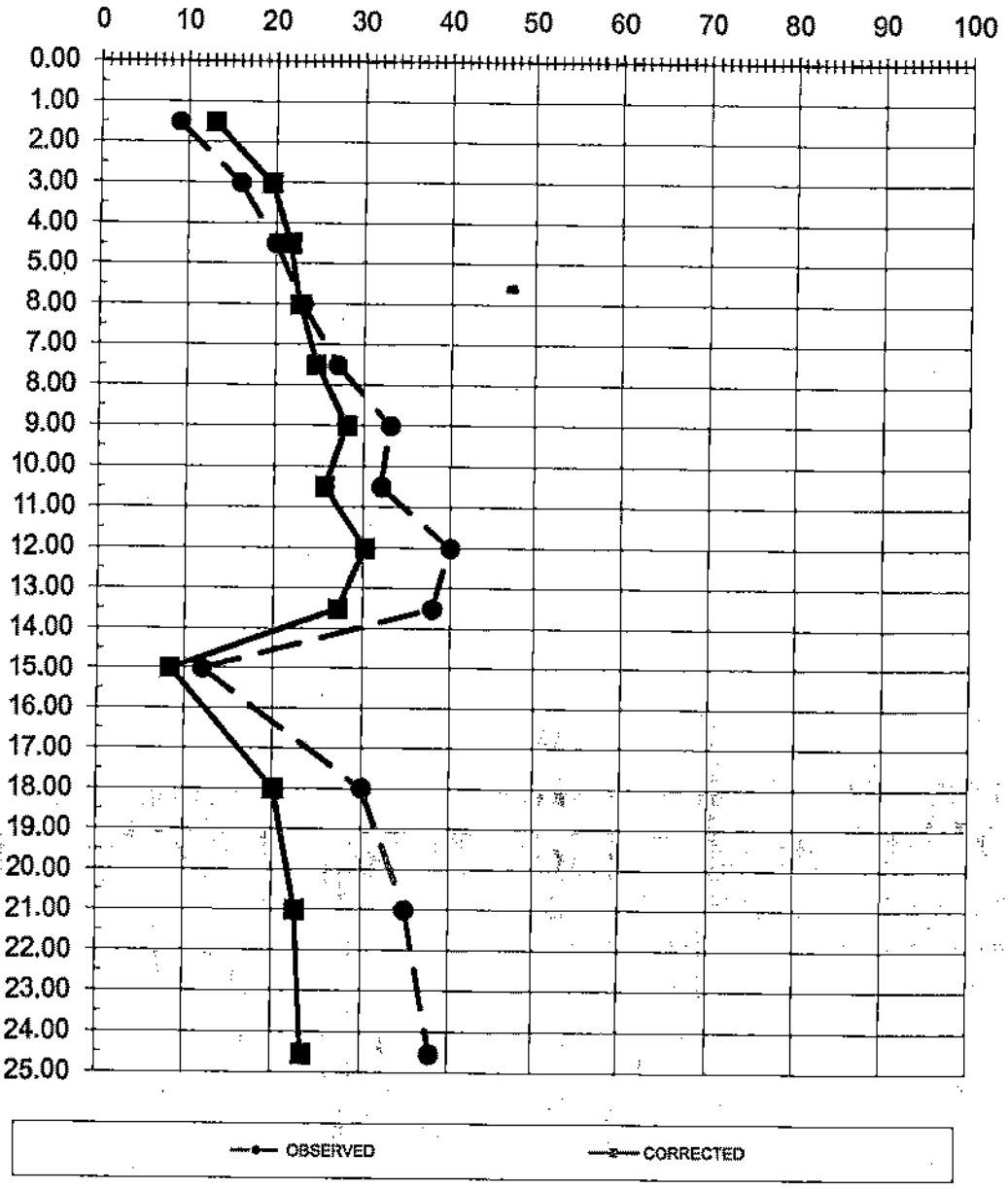
Depth	Gravel (%)	Sand (%)	Silt + Clay (%)
6.00 m depth	7	31	62
7.50 m depth	2	30	68
9.00 m depth	5	33	62
10.50 m depth	3	55	42
12.00 m depth	2	55	43

PARTICLE SIZE DISTRIBUTION CURVE for BH-2



Depth	Gravel (%)	Sand (%)	Silt + Clay (%)
13.50 m depth	3	63	34
15.00 m depth	3	63	34
18.00 m depth	2	57	41
21.00 m depth	6	63	31
24.55 m depth	8	54	38

VARIATION OF SPT 'N' WITH DEPTH for B.H.- 2



Details of BH-5

FIELD BORELOG

Table No.- 3

METHOD OF BORING	: Shell & Auger	BORE HOLE NO.	:5
CASING TYPE & DEPTH	: SX-6,15m	LOCATION	: As per attached location plan
WATER TABLE	: 13.50m	DATE START	: 20-05-2007
DEPTH OF BORING	: 15 m Below EGL	DATE COMPLETION	: 21-05-2007

DEPTH(m) below EGL	DISCRIPTION OF SOIL STRATA	SOIL CLASSIFICATION	LEGEND	STRATA THICKNESS (m)	SAMPLES DETAILS			SPT BLOWS COUNTS				REMARKS
					TYPE	NO.	TEST DEPTH (m) below EGL	15	30	45	"N"	
1.0	SILTY SAND	SM		6.00	DS							
2.0					UDS	1	1.00-1.30	COLLECTED				
					SPT	1	1.50-1.95	2	3	4	7	
3.0					SPT	2	3.00-3.45	4	4	7	11	
4.0					UDS	2	4.00-4.30	COLLECTED				
5.0					SPT	3	4.50-4.95	4	8	11	19	
6.0												
7.0	SANDY SILT WITH GRAVEL	ML-CL		4.00	SPT	4	6.00-6.45	7	11	12	23	
					UDS	3	7.00-7.30	COLLECTED				
8.0					SPT	5	7.50-7.95	7	11	18	29	
9.0					SPT	6	9.00-9.45	6	13	20	33	
10.0												
11.0	SILTY SAND WITH GRAVEL	SM		5.00	UDS	4	10.00-10.30	COLLECTED				
					SPT	7	10.50-10.95	8	12	17	29	
12.0					SPT	8	12.00-12.45	10	14	24	38	
13.0					UDS	5	13.00-13.30	COLLECTED				
14.0					SPT	9	13.50-13.95	7	13	28	41	
15.0					SPT	16	14.55-15.00	9	16	27	43	

ABBREVIATION:- SPT - Standard Penetration Test UDS- Undisturbed Sample

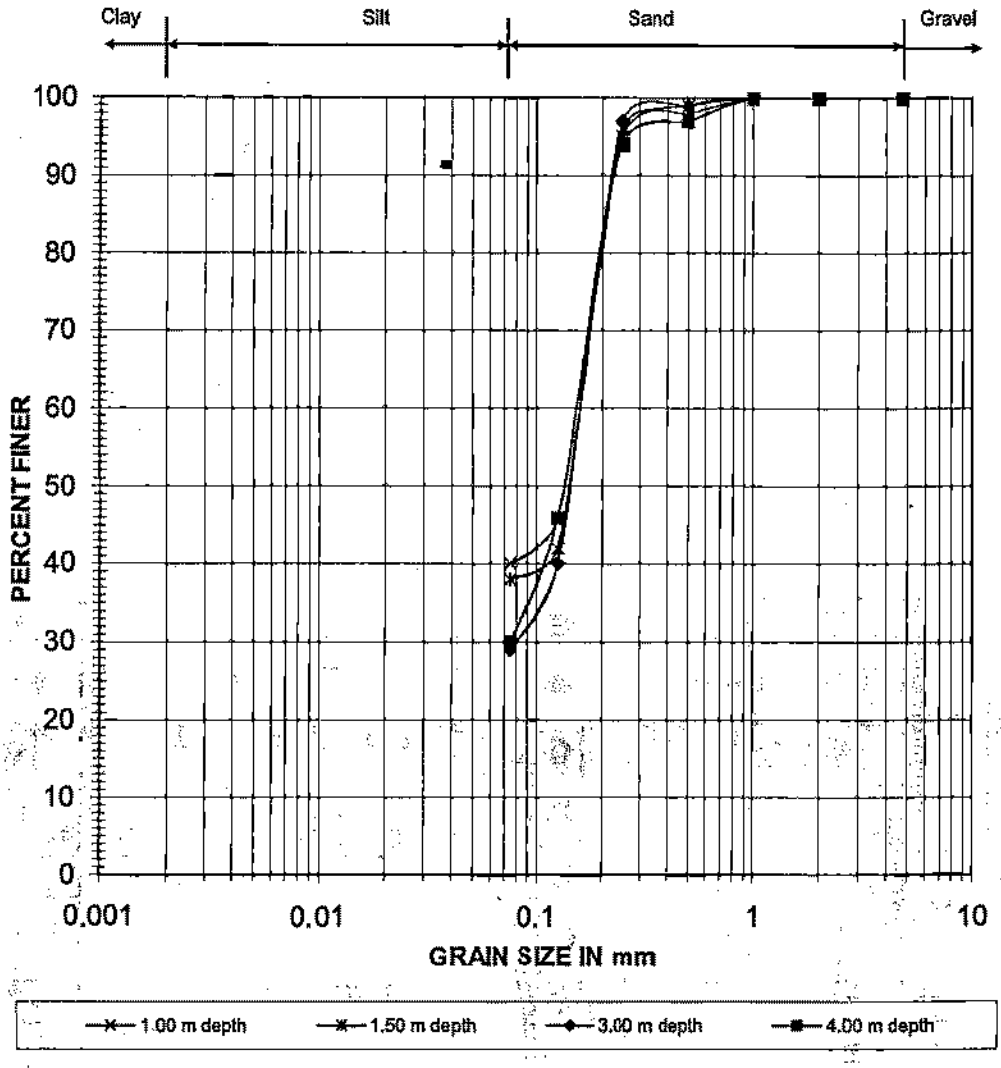
LABORATORY TEST RESULTS OF BH-5

Table No.-4

DEPTH BELOW EGL	TYPE / SAMPLE NO.	DEPTH OF SAMPLE BELOW EGL	SPT VALUE 'N' OBSERVED	SPT VALUE 'N' CORRECTED	DESCRIPTION OF STRATA	LEGEND	GRAIN SIZE ANALYSIS GRAVEL (%)	GRAIN SIZE ANALYSIS SAND (%)	GRAIN SIZE ANALYSIS SILT + CLAY (%)	ATTERBERG LIMIT LIQUID LIMIT (%)	ATTERBERG LIMIT PLASTIC LIMIT (%)	ATTERBERG LIMIT PLASTICITY INDEX	BULK DENSITY in t/m^3	DRY DENSITY in t/m3	MOISTURE CONTENT (%)	SPECIFIC GRAVITY	SHEAR PARAMETER COHESION 'C' in t/m^2	SHEAR PARAMETER ANGLE of FRICTION
	DS	0.00-0.50			SILTY SAND (SM)		1	70	29									
1.00																		
	UDS	1.00-1.30	COLLECTED				0	60	40	24	20	4	1.71	1.55	10.24	2.66	0.10	30
2.00	SPT	1.50-1.95	7	10			0	62	38									
3.00																		
	SPT	3.00-3.45	11	13			0	71	29									
4.00																		
	UDS	4.00-4.30	COLLECTED				0	70	30	NON-PLASTIC			1.73	1.56	10.85	2.65	0.03	31
5.00	SPT	4.50-4.95	19	21			0	66	34									
6.00																		
	SPT	6.00-6.45	23	23	SANDY SILT WITH GRAVEL (ML-CL)		5	29	66									
7.00																		
	UDS	7.00-7.30	COLLECTED				2	28	70	27	21	6	1.75	1.57	11.45	2.67	0.25	30
8.00	SPT	7.50-7.95	29	27			8	29	63									
9.00																		
	SPT	9.00-9.45	33	28			5	29	66									
10.00																		
	UDS	10.00-10.30	COLLECTED				3	63	34	NON-PLASTIC			1.77	1.59	11.60	2.65	0.05	31
11.00	SPT	10.50-10.95	29	23			2	60	38									
12.00																		
	SPT	12.00-12.45	38	29	SILTY SAND WITH GRAVEL (SM)		1	59	40									
13.00																		
	UDS	13.00-13.30	COLLECTED				3	55	42	24	20	4	1.79	1.59	12.90	2.66	0.11	30
14.00	SPT	13.50-13.95	41	23			1	67	32									
15.00	SPT	14.55-15.00	43	23			5	59	36									

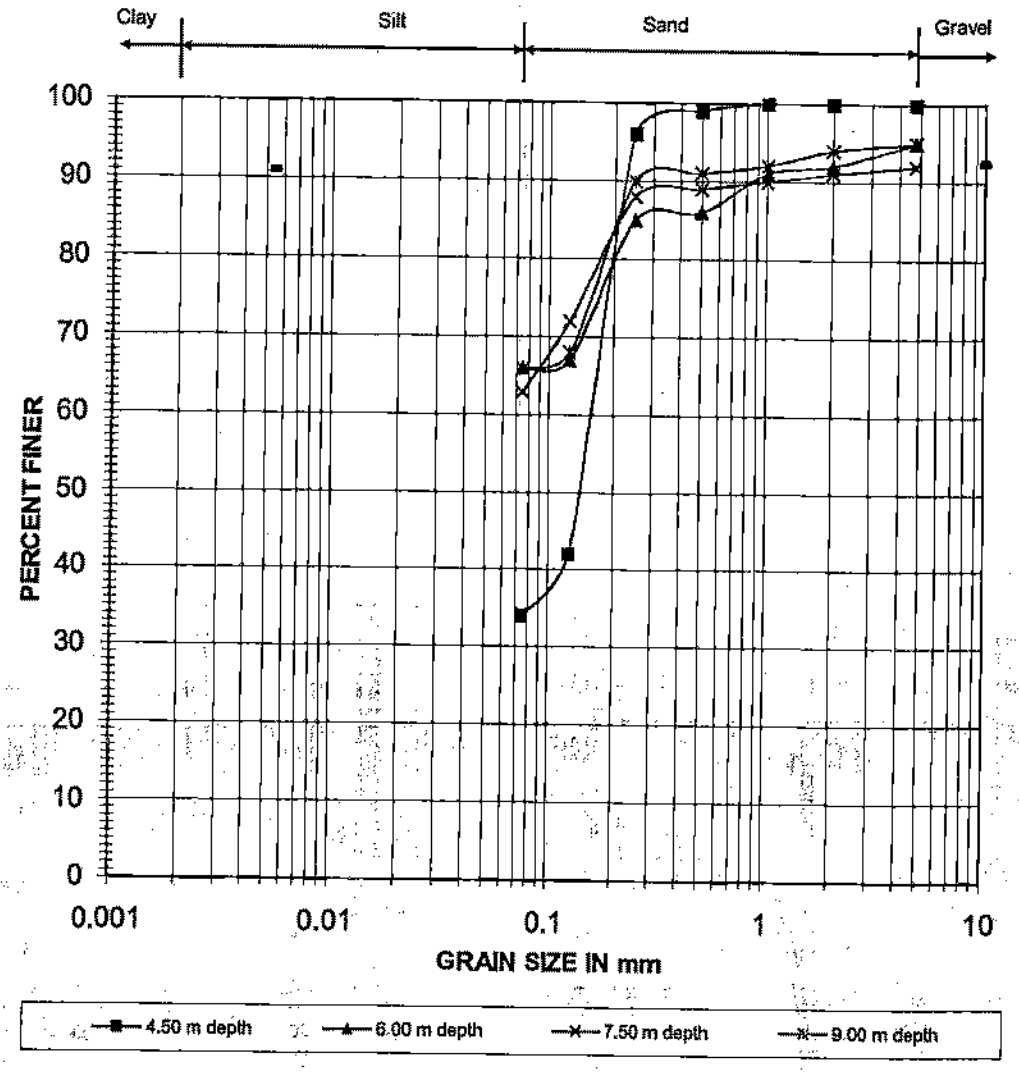
EGL = Existing Ground Level

PARTICLE SIZE DISTRIBUTION CURVE for BH-5



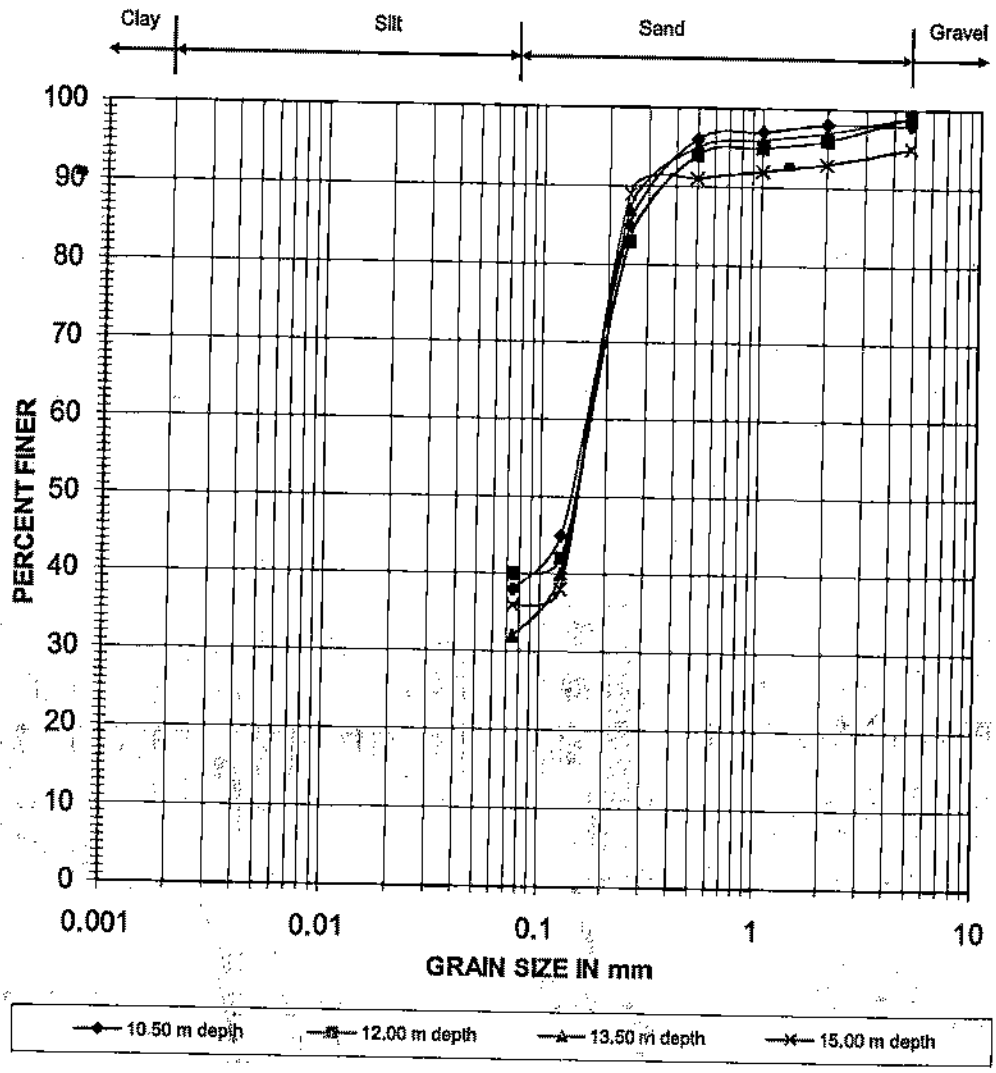
Depth	Gravel (%)	Sand (%)	Silt + Clay (%)
1.00 m depth	0	60	40
1.50 m depth	0	62	38
3.00 m depth	0	71	29
4.00 m depth	0	70	30

PARTICLE SIZE DISTRIBUTION CURVE for BH-5



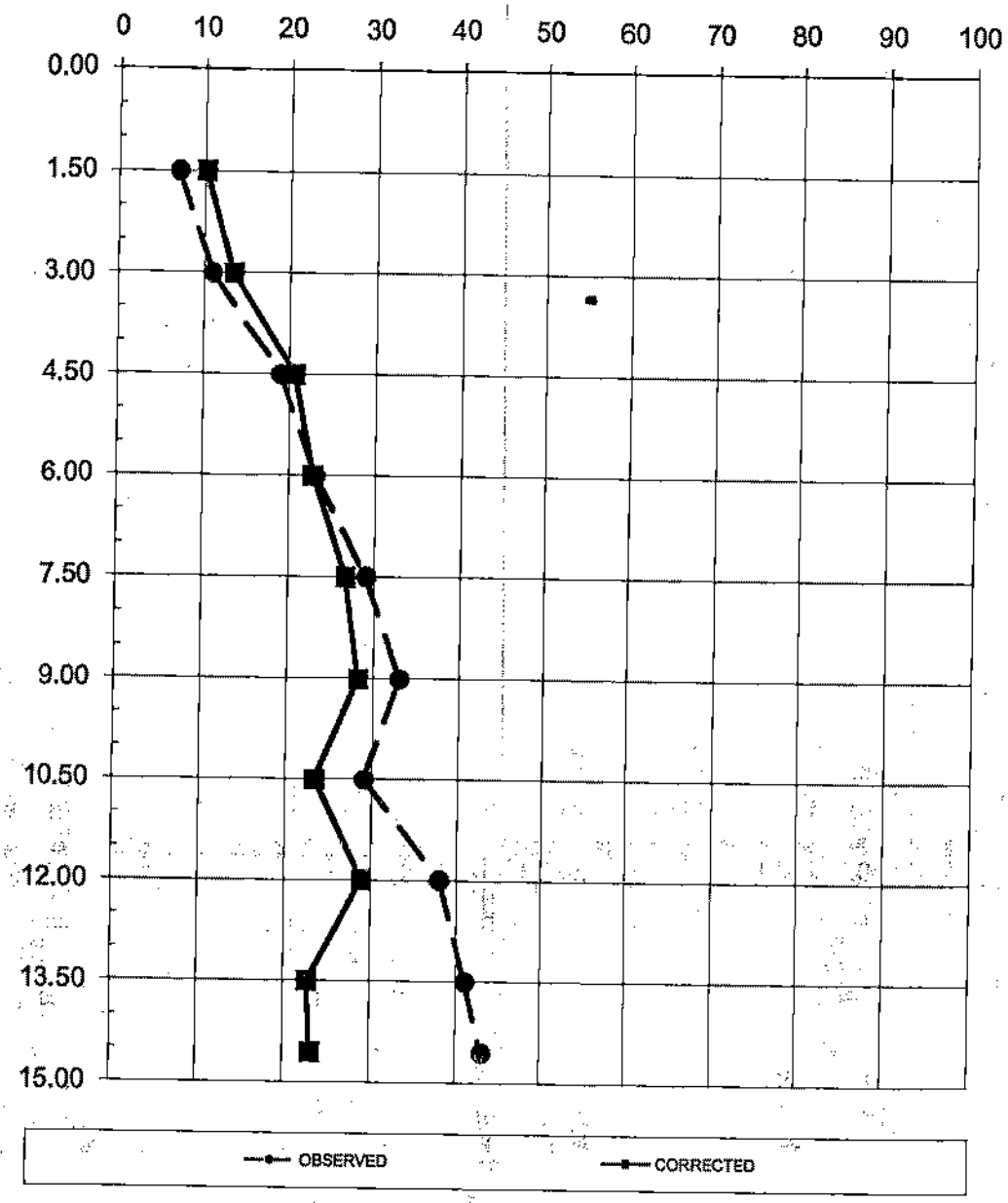
Depth	Gravel (%)	Sand (%)	Silt + Clay (%)
4.50 m depth	0	66	34
6.00 m depth	5	29	66
7.50 m depth	8	29	63
9.00 m depth	5	29	66

PARTICLE SIZE DISTRIBUTION CURVE for BH-5



Depth	Gravel (%)	Sand (%)	Silt + Clay (%)
10.50 m depth	2	60	38
12.00 m depth	1	59	40
13.50 m depth	1	67	32
15.00 m depth	5	59	38

VARIATION OF SPT 'N' WITH DEPTH for B.H.- 5



Details of BH-7

FIELD BORELOG

Table No.- 5

METHOD OF BORING	: Shell & Auger	BORE HOLE NO.	: 7
CASING TYPE & DEPTH	: SX-6, 25m	LOCATION	: As per attached location plan
WATER TABLE	: 13.50m	DATE START	: 15-05-2007
DEPTH OF BORING	: 25 m Below EGL	DATE COMPLETION	: 17-05-2007

DEPTH(m) below EGL	DISCRIPTION OF SOIL STRATA	SOIL CLASSIFICATION	LEGEND	STRATA THICKNESS (m)	SAMPLES DETAILS			SPT BLOWS COUNTS				REMARKS
					TYPE	NO.	TEST DEPTH (m) below EGL	15	30	45	"N"	
1.0	SILTY SAND	SM		6.00	DS							
2.0					UDS	1	1.00-1.30	COLLECTED				
3.0					SPT	1	1.50-1.95	5	6	8	14	
4.0					SPT	2	3.00-3.45	4	6	10	16	
5.0					UDS	2	4.00-4.30	COLLECTED				
6.0					SPT	3	4.50-4.95	5	6	7	13	
7.0	SANDY SILT	ML-CL		4.00	SPT	4	6.00-6.45	5	13	16	29	
8.0					UDS	3	7.00-7.30	COLLECTED				
9.0					SPT	5	7.50-7.95	7	10	12	22	
10.0					SPT	6	9.00-9.45	10	13	18	31	
11.0	SILTY SAND WITH GRAVEL	SM		15.00	UDS	4	10.00-10.30	COLLECTED				
12.0					SPT	7	10.50-10.95	11	15	28	43	
13.0					SPT	8	12.00-12.45	8	14	20	34	
14.0					UDS	5	13.00-13.30	COLLECTED				
15.0					SPT	9	13.50-13.95	9	13	23	36	
16.0					SPT	10	15.00-15.45	9	16	19	35	
17.0					UDS	6	16.00-16.30	COLLECTED				
18.0					SPT	11	18.00-18.45	10	15	19	34	
19.0					UDS	7	19.00-19.30	COLLECTED				
20.0												
21.0					SPT	12	21.00-21.45	10	16	24	40	
22.0					UDS	8	22.00-22.30	COLLECTED				
23.0												
24.0												
25.0					SPT	13	24.55-25.00	19	25	35	61	

ABBREVIATION:- SPT - Standard Penetration Test UDS- Undisturbed Sample

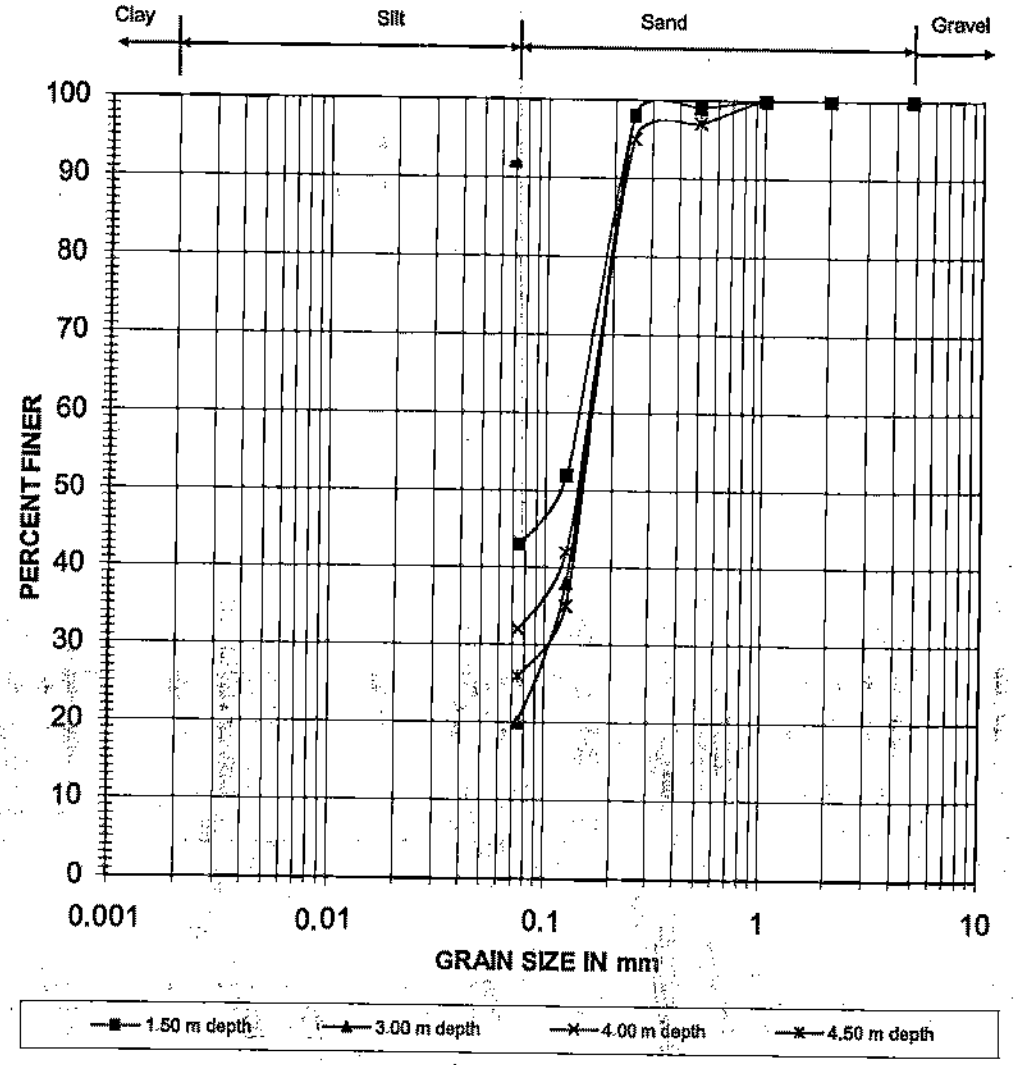
LABORATORY TEST RESULTS OF BH-7

Table No.-6

DEPTH BELOW EGL	TYPE / SAMPLE NO.	DEPTH OF SAMPLE BELOW EGL	SPT VALUE 'N'		DESCRIPTION OF STRATA	LEGEND	GRAIN SIZE ANALYSIS			ATTERBERG LIMIT			BULK DENSITY in t/m^3	DRY DENSITY in t/m3	MOISTURE CONTENT (%)	SPECIFIC GRAVITY	SHEAR PARAMETER	
			OBSERVED	CORRECTED			GRAVEL (%)	SAND (%)	SILT + CLAY (%)	LIQUID LIMIT (%)	PLASTIC LIMIT (%)	PLASTICITY INDEX					COHESION 'C' in t/m^2	ANGLE of FRICTION
	DS	0.00-0.50			SILTY SAND (SM)		0	86	14									
1.00																		
	UDS	1.00-1.30	COLLECTED				0	78	22	NON-PLASTIC			1.72	1.56	10.02	2.65	0.02	31
2.00	SPT	1.50-1.95	14	20			0	57	43									
3.00																		
	SPT	3.00-3.45	16	20			0	80	20									
4.00																		
	UDS	4.00-4.30	COLLECTED				0	68	32	NON-PLASTIC			1.73	1.57	10.25	2.66	0.04	31
5.00	SPT	4.50-4.95	13	14			0	74	26									
6.00																		
	SPT	6.00-6.45	29	29			9	36	55									
7.00																		
	UDS	7.00-7.30	COLLECTED		SANDY SILT (ML-CL)		3	29	68	26	20	6	1.75	1.58	11.09	2.67	0.24	30
8.00	SPT	7.50-7.95	22	20			6	29	65									
9.00																		
	SPT	9.00-9.45	31	26			4	40	56									
10.00																		
	UDS	10.00-10.30	COLLECTED				2	56	42	25	21	4	1.76	1.58	11.50	2.66	0.11	30
11.00	SPT	10.50-10.95	43	34			1	64	35									
12.00																		
	SPT	12.00-12.45	34	28			3	66	31									
13.00																		
	UDS	13.00-13.30	COLLECTED				2	79	19	NON-PLASTIC			1.77	1.58	11.95	2.65	0.02	31
14.00	SPT	13.50-13.95	36	28			6	64	30									
15.00																		
	SPT	15.00-15.45	35	25			6	64	30									
16.00																		
	UDS	16.00-16.30	COLLECTED				3	54	43	25	21	4	1.79	1.59	12.45	2.66	0.12	30
17.00																		
18.00					SILTY SAND WITH GRAVEL (SM)													
	SPT	18.00-18.45	34	23			5	63	32									
19.00																		
	UDS	19.00-19.30	COLLECTED				3	67	30	NON-PLASTIC			1.81	1.59	14.10	2.65	0.03	31
20.00																		
21.00																		
	SPT	21.00-21.45	40	26			9	65	26									
22.00																		
	UDS	22.00-22.30	COLLECTED				5	50	45	25	21	4	1.83	1.60	14.60	2.66	0.13	30
23.00																		
24.00																		
25.00	SPT	24.55-25.00	61	38			13	52	35									

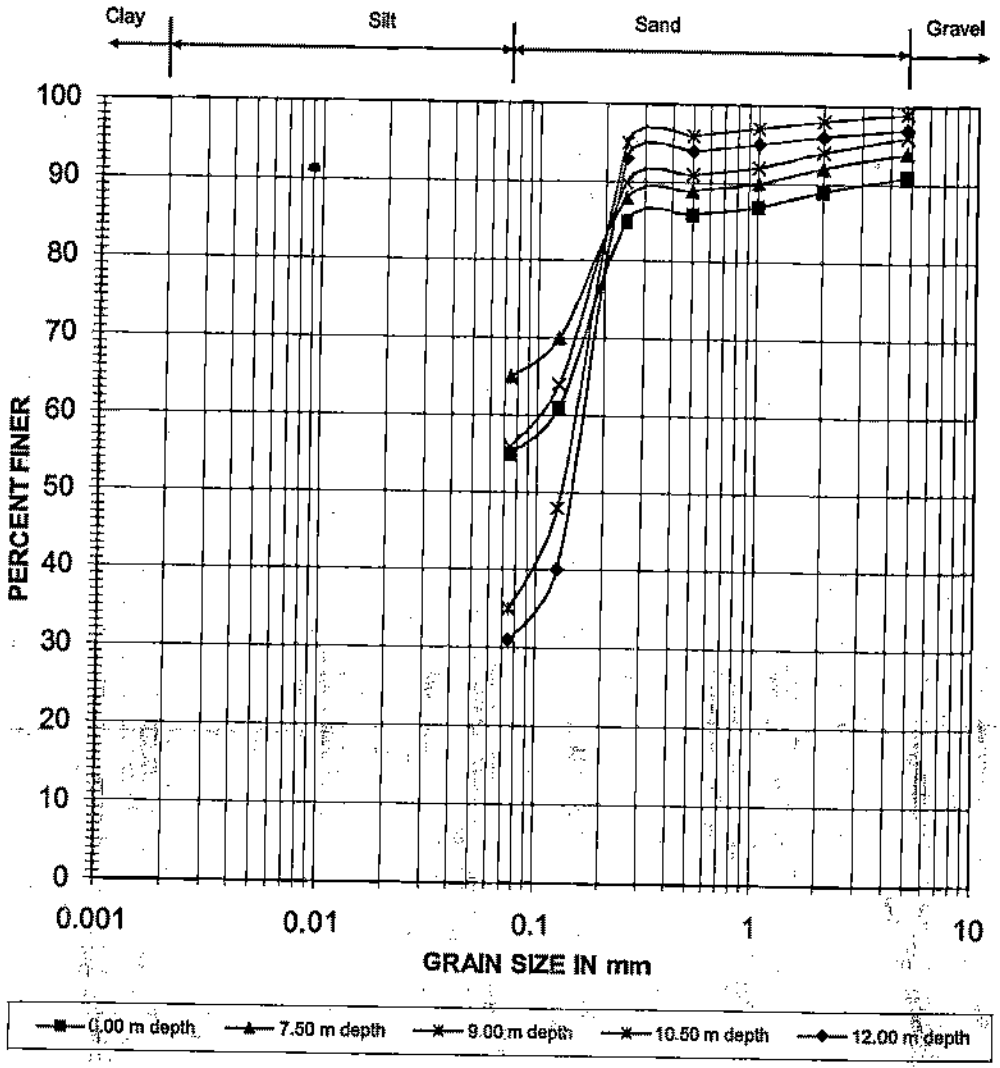
EGL = Existing Ground Level

PARTICLE SIZE DISTRIBUTION CURVE for BH-7



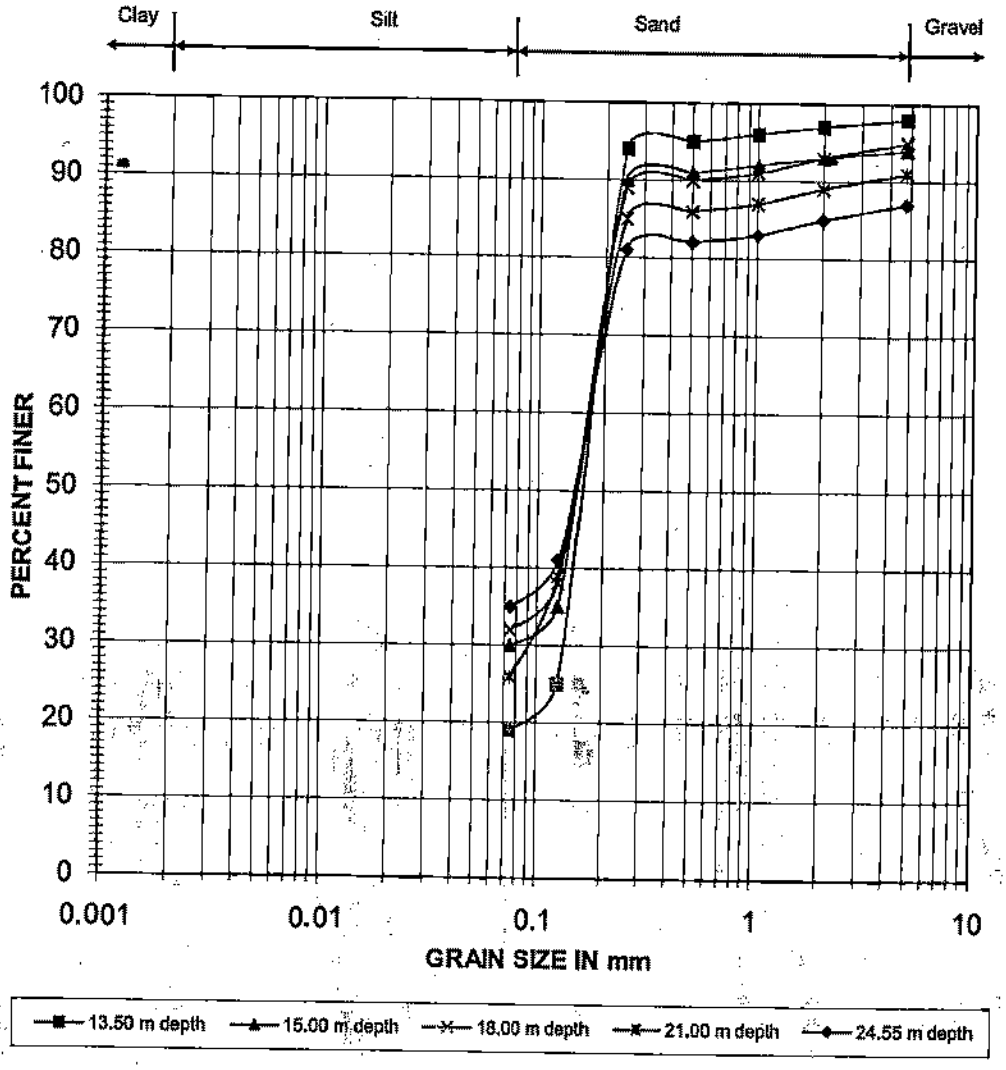
Depth	Gravel (%)	Sand (%)	Silt + Clay (%)
1.50 m depth	0	57	43
3.00 m depth	0	80	20
4.00 m depth	0	68	32
4.50 m depth	0	74	26

PARTICLE SIZE DISTRIBUTION CURVE for BH-7



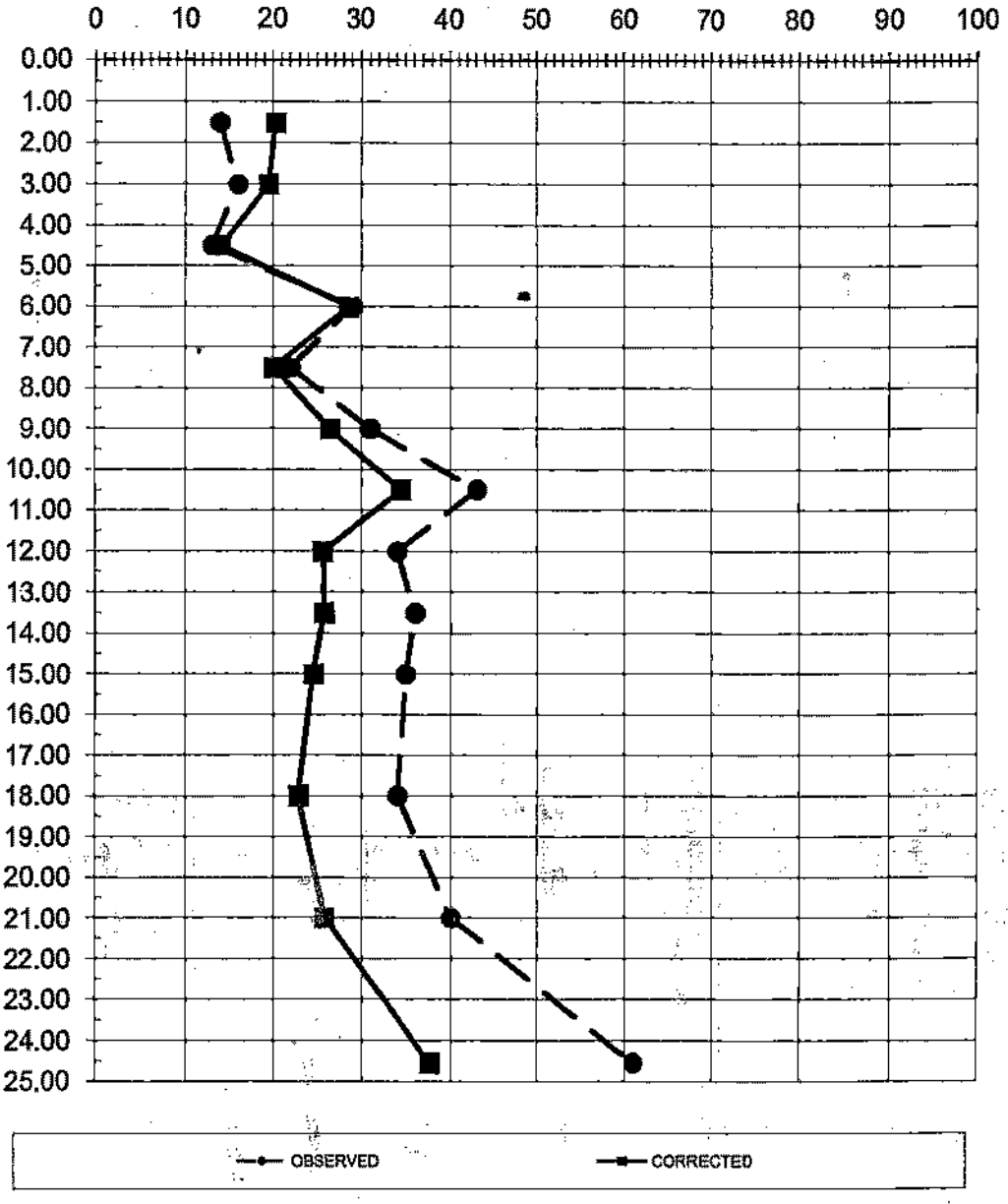
Depth	Gravel (%)	Sand (%)	Silt + Clay (%)
6.00 m depth	9	36	55
7.50 m depth	6	29	65
9.00 m depth	4	40	56
10.50 m depth	1	64	35
12.00 m depth	3	66	31

PARTICLE SIZE DISTRIBUTION CURVE for BH-7



Depth	Gravel (%)	Sand (%)	Silt + Clay (%)
13.50 m depth	6	64	30
15.00 m depth	6	64	30
18.00 m depth	5	63	32
21.00 m depth	9	65	26
24.55 m depth	13	52	35

VARIATION OF SPT 'N' WITH DEPTH for B.H.- 7



Details of
BH-9

FIELD BORELOG

Table No.- 7

METHOD OF BORING	: Shell & Auger	BORE HOLE NO.	: 9
CASING TYPE & DEPTH	: SX-6, 25m	LOCATION	: As per attached location plan
WATER TABLE	: 13.50m	DATE START	: 18-05-2007
DEPTH OF BORING	: 25 m Below EGL	DATE COMPLETION	: 20-05-2007

DEPTH(m) below EGL	DISCRIPTION OF SOIL STRATA	SOIL CLASSIFICATION	LEGEND	STRATA THICKNESS (m)	SAMPLES DETAILS			SPT BLOWS COUNTS				REMARKS
					TYPE	NO.	TEST DEPTH (m) below EGL	15	30	45	"N"	
1.0	SILTY SAND	SM		6.00	DS							
2.0					UDS	1	1.00-1.30	COLLECTED				
					SPT	1	1.50-1.95	3	6	6	12	
3.0												
4.0					SPT	2	3.00-3.45	5	7	9	16	
5.0					UDS	2	4.00-4.30	COLLECTED				
					SPT	3	4.50-4.95	5	9	10	19	
6.0												
7.0	SANDY SILT WITH GRAVEL	ML-CL		4.00	SPT	4	6.00-6.45	6	10	14	24	
					UDS	3	7.00-7.30	COLLECTED				
8.0					SPT	5	7.50-7.95	2	5	8	13	
9.0												
10.0					SPT	6	9.00-9.45	4	7	9	16	
11.0	SILTY SAND WITH GRAVEL	SM		15.00	UDS	4	10.00-10.30	COLLECTED				
					SPT	7	10.50-10.95	10	14	16	30	
12.0												
					SPT	8	12.00-12.45	19	30	39	69	
13.0												
					UDS	5	13.00-13.30	COLLECTED				
14.0					SPT	9	13.50-13.95	7	7	8	15	
15.0												
					SPT	10	15.00-15.45	8	16	18	34	
16.0												
					UDS	6	16.00-16.30	COLLECTED				
17.0												
18.0					SPT	11	18.00-18.45	9	12	20	32	
19.0												
					UDS	7	19.00-19.30	COLLECTED				
20.0												
21.0												
					SPT	12	21.00-21.45	11	15	23	38	
22.0												
					UDS	8	22.00-22.30	COLLECTED				
23.0												
24.0												
25.0					SPT	13	24.55-25.00	17	23	32	55	

ABBREVIATION:- SPT - Standard Penetration Test UDS- Undisturbed Sample

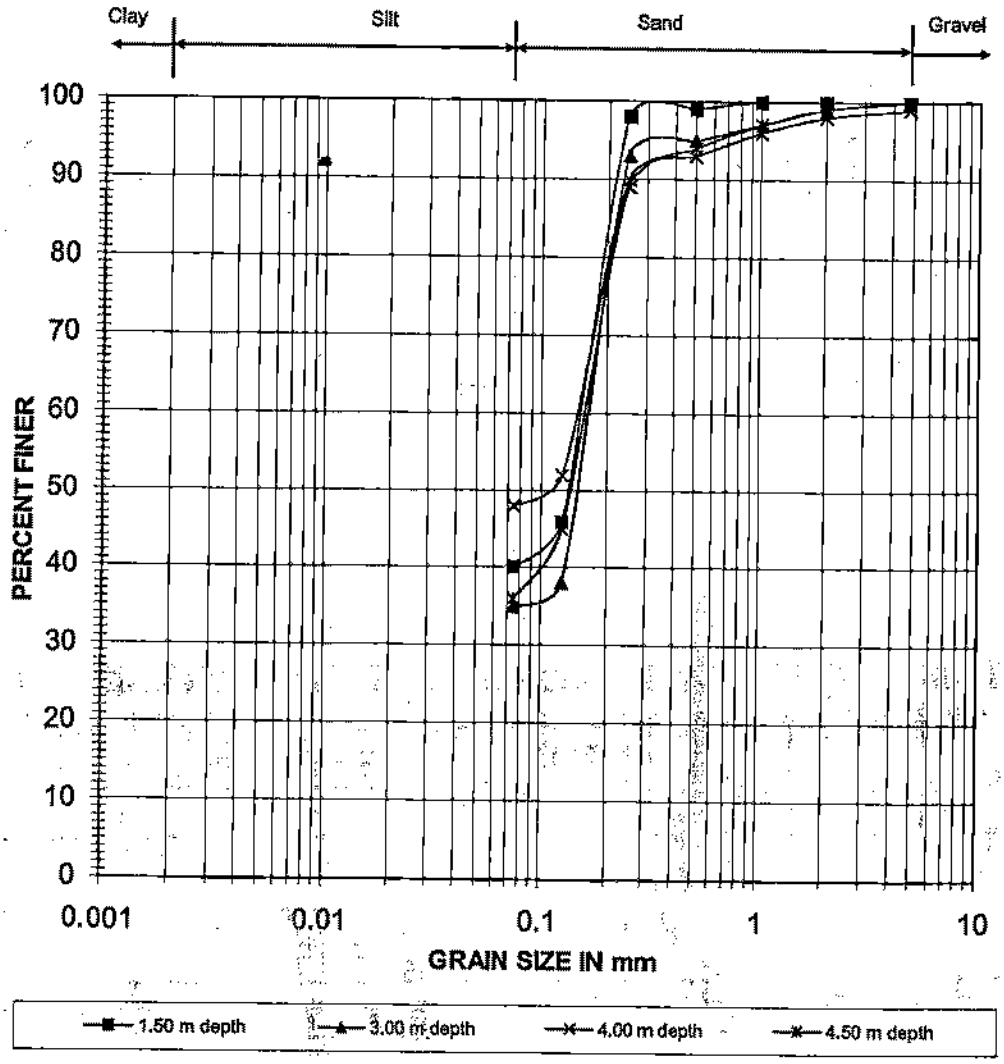
LABORATORY TEST RESULTS OF BH-9

Table No.-8

DEPTH BELOW EGL	TYPE / SAMPLE NO.	DEPTH OF SAMPLE BELOW EGL	SPT VALUE 'N' OBSERVED	SPT VALUE 'N' CORRECTED	DESCRIPTION OF STRATA	LEGEND	GRAIN SIZE ANALYSIS GRAVEL (%)	SAND (%)	SILT + CLAY (%)	ATTERBERG LIMIT LIQUID LIMIT (%)	PLASTIC LIMIT (%)	PLASTICITY INDEX	BULK DENSITY in t/m³	DRY DENSITY in t/m3	MOISTURE CONTENT (%)	SPECIFIC GRAVITY	SHEAR PARAMETER COHESION 'C' in t/m²	ANGLE of FRICTION
	DS	0.00-0.50			SILTY SAND (SM)		2	64	34									
1.00																		
	UDS	1.00-1.30	COLLECTED				1	67	32	NON-PLASTIC			1.73	1.56	10.60	2.65	0.02	31
2.00	SPT	1.50-1.95	12	17			0	60	40									
3.00																		
	SPT	3.00-3.45	16	20			0	65	35									
4.00																		
	UDS	4.00-4.30	COLLECTED				1	51	48	25	21	4	1.75	1.58	10.75	2.66	0.14	30
5.00	SPT	4.50-4.95	19	21			0	64	36									
6.00																		
	SPT	6.00-6.45	24	24	SANDY SILT WITH GRAVEL (ML-CL)		3	32	65									
7.00																		
	UDS	7.00-7.30	COLLECTED				4	25	71	26	20	6	1.77	1.59	11.40	2.67	0.25	30
8.00	SPT	7.50-7.95	13	12			2	29	69									
9.00																		
	SPT	9.00-9.45	16	14			5	29	66									
10.00																		
	UDS	10.00-10.30	COLLECTED		SILTY SAND WITH GRAVEL (SM)		3	59	38	NON-PLASTIC			1.78	1.59	11.89	2.66	0.04	31
11.00	SPT	10.50-10.95	30	24			1	56	43									
12.00																		
	SPT	12.00-12.45	69	52			2	53	45									
13.00																		
	UDS	13.00-13.30	COLLECTED				1	69	30	NON-PLASTIC			1.80	1.59	12.95	2.65	0.03	31
14.00	SPT	13.50-13.95	15	11			5	59	36									
15.00																		
	SPT	15.00-15.45	34	24			5	59	36									
16.00																		
	UDS	16.00-16.30	COLLECTED				3	55	42	24	20	4	1.82	1.59	14.15	2.66	0.11	30
17.00																		
18.00	SPT	18.00-18.45	32	22			4	56	40									
19.00																		
	UDS	19.00-19.30	COLLECTED				2	53	45	24	20	4	1.83	1.59	14.75	2.66	0.13	30
20.00																		
21.00	SPT	21.00-21.45	38	25			7	49	44									
22.00																		
	UDS	22.00-22.30	COLLECTED				6	52	42	24	20	4	1.84	1.60	14.95	2.66	0.11	30
23.00																		
24.00																		
25.00	SPT	24.55-25.00	55	34			3	68	29									

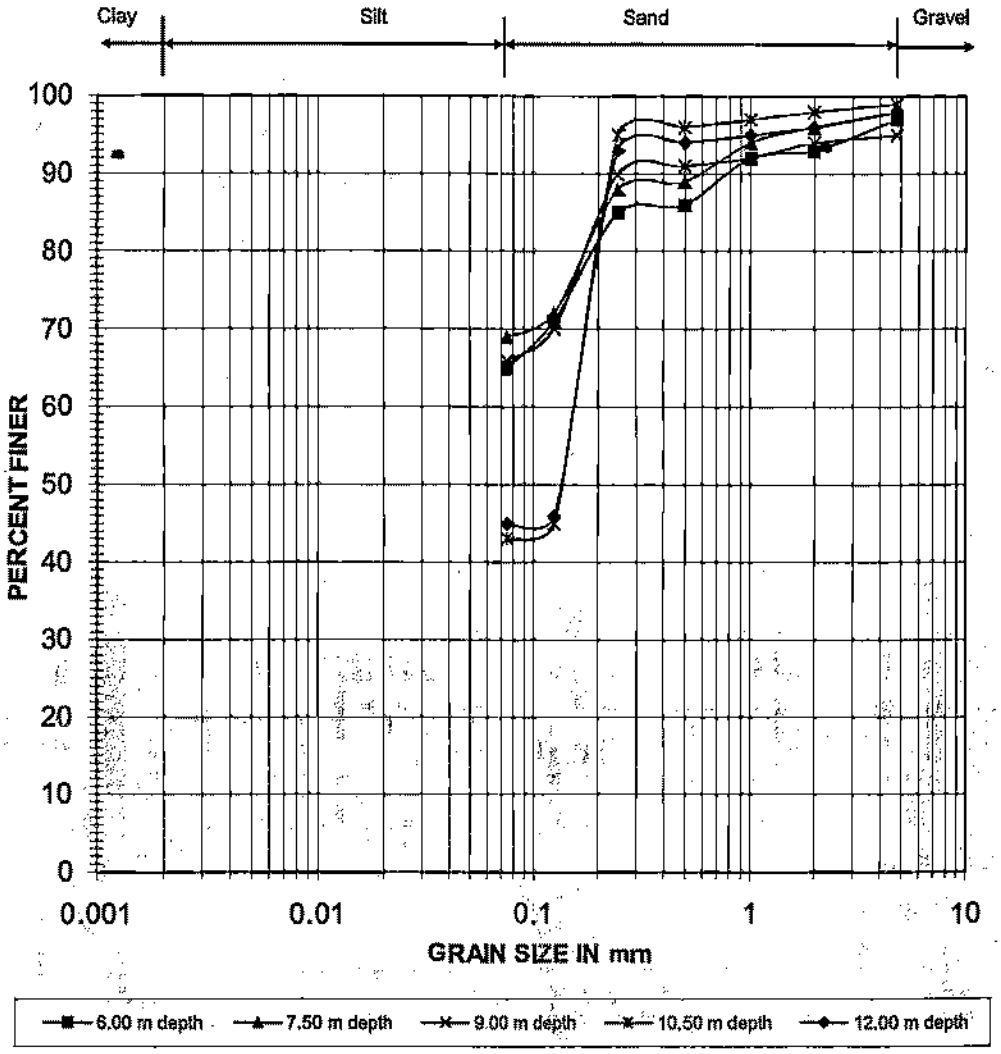
EGL = Existing Ground Level

PARTICLE SIZE DISTRIBUTION CURVE for BH-9



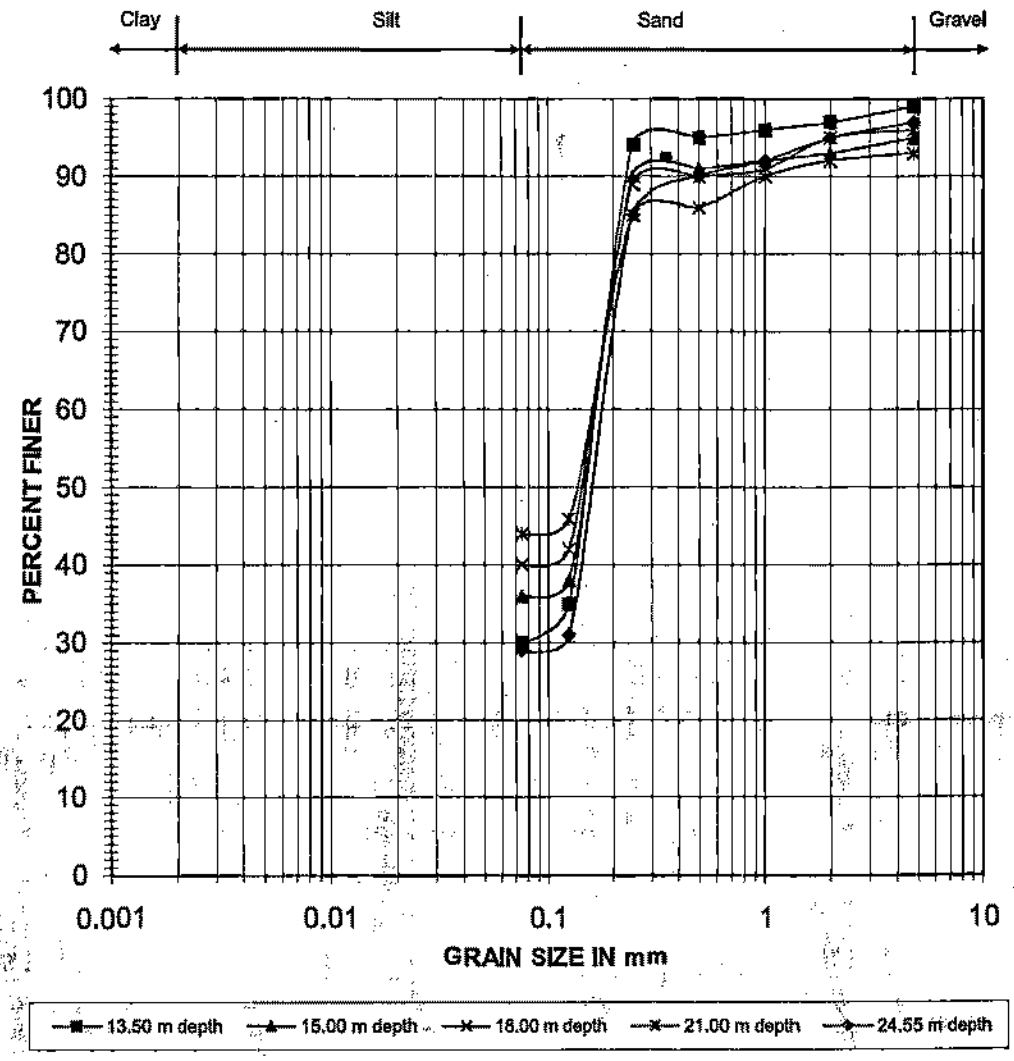
Depth	Gravel (%)	Sand (%)	Silt + Clay (%)
1.50 m depth	0	60	40
3.00 m depth	0	65	35
4.00 m depth	1	51	48
4.50 m depth	0	64	36

PARTICLE SIZE DISTRIBUTION CURVE for BH-9



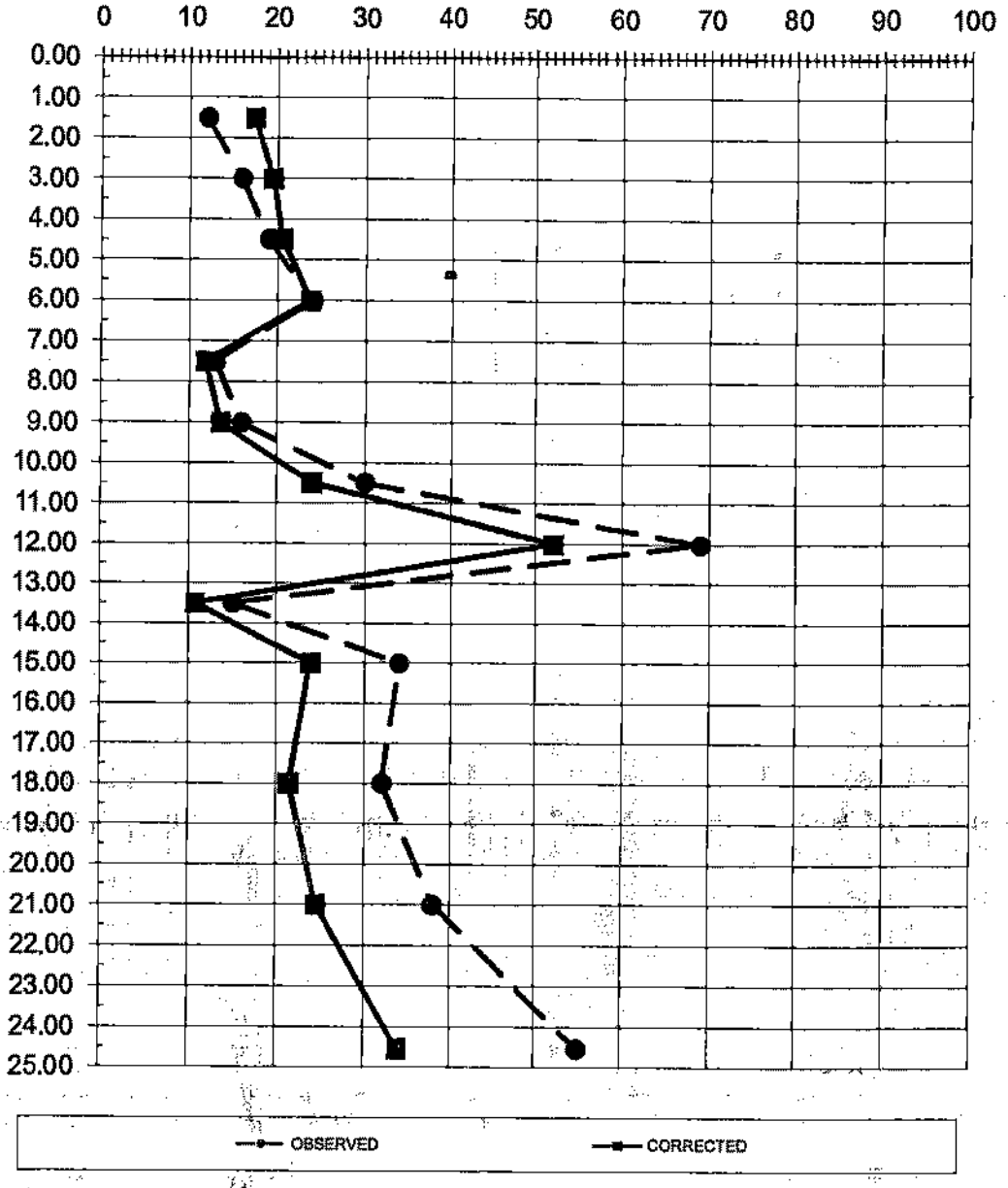
Depth	Gravel (%)	Sand (%)	Silt + Clay (%)
6.00 m depth	3	32	65
7.50 m depth	2	29	69
9.00 m depth	5	29	66
10.50 m depth	1	56	43
12.00 m depth	2	53	45

PARTICLE SIZE DISTRIBUTION CURVE for BH-9



Depth	Gravel (%)	Sand (%)	Silt + Clay (%)
13.50 m depth	5	59	36
15.00 m depth	5	59	36
18.00 m depth	4	56	40
21.00 m depth	7	49	44
24.55 m depth	3	68	29

VARIATION OF SPT 'N' WITH DEPTH for B.H.- 9



Annexure-A
Bearing Capacity Calculations for Shallow and Pile foundation

ANNEXURE-A
Bearing Capacity calculations for shallow and pile foundation
(as per IS:6403-1981and IS:2911 (Part – III) – 1980)

A. Capacity calculation for shallow foundation

I. Shear Failure Criterion :

At founding level	=	1.50m	7.00m
Average Bulk density [t/m³]	=	1.70	1.74
Average Dry density [t/m³]	=	1.56	1.58
C	=	0.10 t/m²	0.20
ϕ[in degree]	=	30	30

- ϕ = 30° ⇒ Nc =18.08 Nq = 8.88 Ny = 8.73

Founding Level	Type of Foundation	Width / size	Sc	Sq	Sy	dc	dq = dy	$q_{net\ safe}$ in t/sqm
1.50m	Isolated *Strip*	2.00m	1	1	1	1.259	1.130	11.12
		2.50m	1	1	1	1.208	1.104	11.53
	Isolated *Square*	2.50mx2.50m	1.3	1.2	0.8	1.208	1.104	12.55
		3.00mx3.00m	1.3	1.2	0.8	1.173	1.086	12.88
	Raft	>6.00m	1.3	1.2	0.8	1.088	1.043	15.43
7.00m	Isolated *Square*	2.50mx2.50m	1.3	1.2	0.8	1.208	1.104	13.77
		3.00mx3.00m	1.3	1.2	0.8	1.173	1.086	14.08
	Raft	>6.00m	1.3	1.2	0.8	1.086	1.043	18.62

The values of bearing capacity factors Nc, Nq and Nγ have been arrived at from table 1 of IS:6403-1981.

The depth factors dc, dq and dγ have been calculated as per clause 5.1.2.2 of IS:6403-1981.

The Shape factors Sc, Sq, Sy have taken from clause 5.1.2.1 of IS: 6403-1981.

II. Settlement Criterion:

As per IS:8009-1978 Part-I- Clause-9.1.4, the settlement for different width has been computed. For the allowable total settlement of 50mm for isolated footing and 65mm for raft as per IS:1904) the safe bearing pressure is computed and tabulated as following:

Founding Level below EGL	Type of Foundation	Size/Width of Foundation	N Value	Settlement for a pressure of 10 t / m²	Safe Bearing Pressure (t / m²)
1.50 m	Isolated *Strip*	2.00m	15	27.00	18.52
		2.50m		30.00	16.67
	Isolated *Square*	2.50mx2.50m		26.40	18.94
		3.00mx3.00m		28.56	17.51
	Raft	>6.00m		36.48	17.82
7.00m	Isolated *Square*	2.50mx2.50m		27.52	18.17
		3.00mx3.00m		29.57	16.91
	Raft	>6.00m		36.48	17.82

Hence the values of safe bearing capacity as chosen the minimum value (rounded off) from above two criterion are as following:

Founding Level Below EGL	Type of Foundation	Size / Width of Foundation	$q_{net\ safe}$ (t / m²)	$q_{gross\ safe}$ (t / m²)
1.50m	Isolated Strip	2.00m	11.00	-
		2.50m	11.50	-
	Isolated Square	2.50m X 2.50m	12.50	-
		3.00m X 3.00m	12.75	-
	Raft	>6.00m	15.00	-
7.00m	Isolated Square	2.50mx2.50m	13.50	25.50
		3.00mx3.00m	14.00	26.00
	Raft	>6.00m	16.50	28.50

The gross safe bearing capacity has been calculated by adding the effective overburden pressure due to the presence of soil before excavation for the basement [=y*(Depth of Founding Level) =1.72*(7.00) = 12.04 ~ 12.00 t / m² for 7.0m founding level below EGL].

B. Pile Capacity Calculation Bored Cast in situ under – reamed (single ream) Pile

Pile dia in m	Cut off level	Resting Level	Capacity for 3.5m length	Increament for 30cm length	Capacity for assigned length	Recommended Capacity
0.3	1.00	6.00	16t	1.4 t	23 t	20 t
0.3	1.00	8.00	16t	1.4 t	32 t	30 t
0.3	1.00	10.00	16.t	1.4 t	41 t	40 t
0.4	1.00	6.00	23t	1.9 t	32 t	30 t
0.4	1.00	8.00	23t	1.9 t	45 t	45 t
0.4	1.00	10.00	23t	1.9 t	57 t	50 t
0.5	1.00	6.00	42t	2.4 t	54 t	50 t
0.5	1.00	8.00	42t	2.4 t	70 t	70 t
0.5	1.00	10.00	42t	2.4 t	86 t	80 t

Annexure-B
List of Referred IS Codes

ANNEXURE-B
LIST OF REFERRED IS CODES

Field Investigation

1. IS : 1948-1970 Classification and identification of soils for general engineering purposes (first revision) Amendment 2
2. IS : 1892-1979 Code of practice for sub surface investigations for foundations
3. IS : 2131-1981 Method of standard penetration tests for soils
4. IS : 2132-1986 Code of practice for thin walled tube sampling of soils

Laboratory tests

1. IS : 2720-1983 (Part 1) Methods of tests for soils: Preparation of dry soil samples for various tests (second revision)
2. IS : 2720-1980 (Part-2) Methods of test for soils: Determination of water content (second revision) Amendment 1
3. IS : 2720-1980 (Part-3/Sec 1) Method of test for soil : Determination of specific gravity : Fine grained soils
4. IS : 2720-1980 (Part-3/Sec 2) Method of test for soil : Determination of specific gravity : Fine , medium & coarse grained soils.(First revision)
5. IS : 2720-1985 (Part-4) Methods of test for soils: Grain size analysis (Second revision)
6. IS : 2720-1985 (Part-6) Methods of test for soils: Determination of liquid and plastic limit (Second revision)

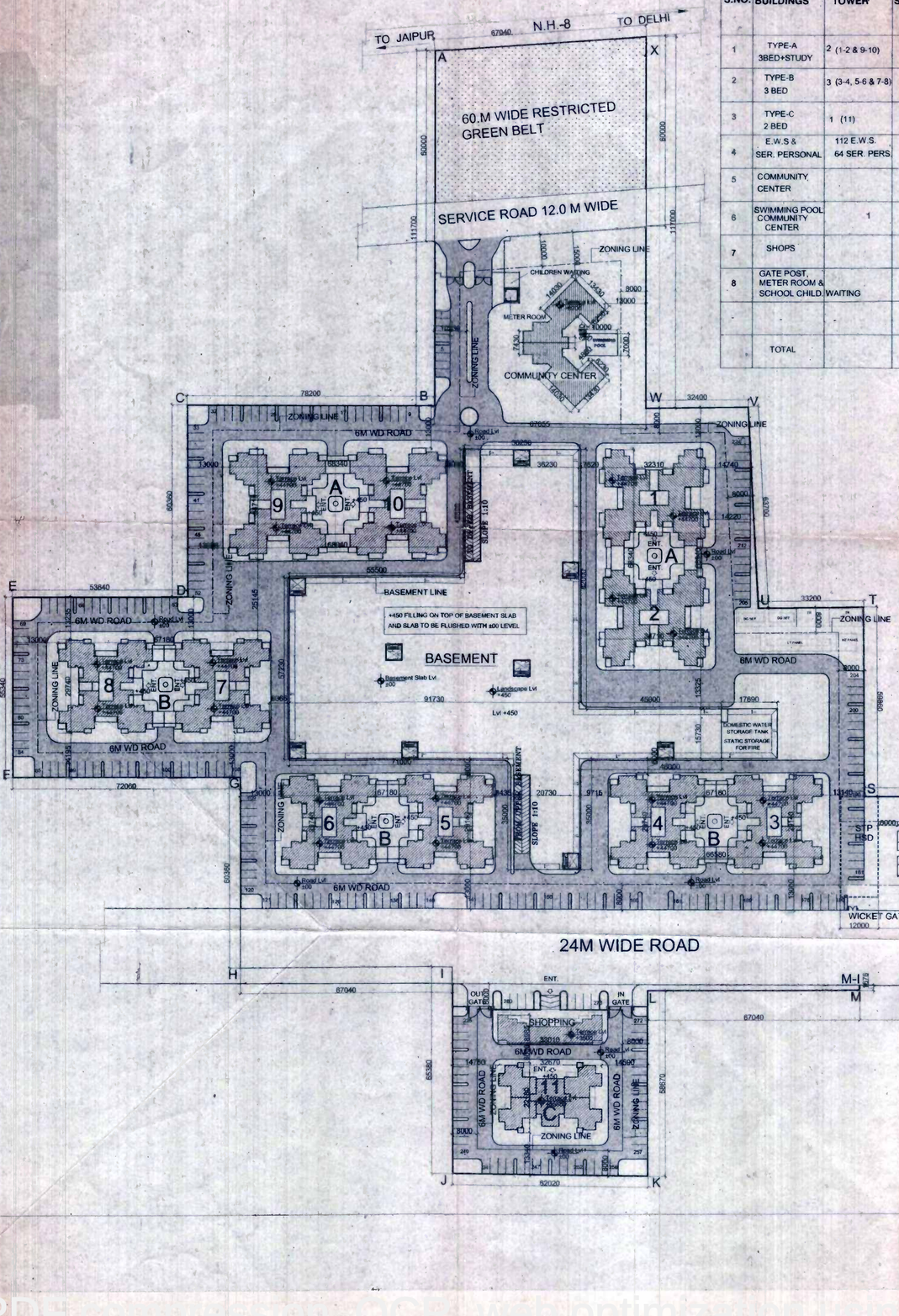
Foundation construction

1. IS : 1904-1986 Code of practice for design and construction of foundation in soils : General requirements (Third revision)

2. IS : 6403-1981 Code of practice for determination of bearing capacity of shallow foundations

3. IS : 8009-1976 (Part-1) Code of practice for calculation of settlements of foundations : Shallow foundations subjected to symmetrical static vertical loads (Amendment 2)

4. IS : 2911-1979 (Part-1) Code of practice for Pile Foundation



AREA CHART:

S.NO.	TYPE OF BUILDINGS	NOS. OF TOWER	NOS. OF STOREY	GROUND COVERAGE (M²)	F.A.R AT GROUND FLOOR (M²)	TOTAL F.A.R. IN TOWER (M²)	NO. OF DWELLING UNITS ON GROUND FL.	TOTAL NO. OF DWELLING UNITS ON TYP. FL.	TOTAL NO. OF DWELLING UNITS ON ALL FLOORS	POPULATION	REMARKS
1	TYPE-A 3BED+STUDY	2 (1-2 & 9-10)	G+14	1401.624X2 =2803.248	610.616X2 =1221.232	18111.020X2 =36222.040	8	224	232	232x5=1160	REFER DRG. NO. DH/SUB/A/08
2	TYPE-B 3 BED	3 (3-4, 5-6 & 7-8)	G+14	1229.824X3 =3689.472	578.152X3 =1734.456	15736.220X3 =47208.660	12	336	348	348x5=1740	REFER DRG. NO. DH/SUB/B/08
3	TYPE-C 2 BED	1 (11)	G+11	475.060	475.060	5539.636	0	55	55	55x5=275	REFER DRG. NO. DH/SUB/C/02
4	E.W.S & SER. PERSONAL	112 E.W.S. 64 SER. PERS.	G+10	380.408	375.782	4069.002	16	160	176	176x2=352	REFER DRG. NO. DH/SUB/EWS-SP/03
5	COMMUNITY CENTER		G+1	449.781	436.385	1232.681					REFER DRG. NO. DH/SUB/CC/03
6	SWIMMING POOL COMMUNITY CENTER	1	G	70.000							
7	SHOPS		G+1	216.403	216.403	216.403					REFER DRG. NO. DH/SUB/SHOP/01
8	GATE POST, METER ROOM & SCHOOL CHILD. WAITING		G	40.464							
-	-	-	-	-	-	-	-	-	-	-	REFER DRG. NO. S/TYPE.A/-01
	TOTAL			8124.836	4459.318	94488.422			635 DU'S	3527	

AREA STATEMENT

AREA OF THE SITE	= 13.394 ACRE or 54203.509		M²
PERMISSIBLE F.A.R	= 175%	= 94856.140	M²
ACHIEVED F.A.R	= 174.32%	= 94488.422	M²
PERMISSIBLE GROUND COVERAGE	= 35%	= 18971.228	M²
PROPOSED GROUND COVERAGE	= 14.98%	8124.836	M²
REQUIRED AREA FOR TOTLOTS (15% OF 54203.509)	=	8130.526	M²
AREA PROVIDED IN TOTLOTS	= 8391.526		M²
= 15.481%	(REFER DRG NO DH/SUB/SP/02)		
AREA PROVIDED IN STILT	= 791.008+651.672		
	= 1442.680		M²
	(REFER DRG NO DH/SUB/A/08 & DH/SUB/B/08)		
PROPOSED COVD AREA IN BASEMENT	= UPPER+LOWER		
	= 7586.000+7586.000		
	= 15172.000		M²
	(REFER DRG NO DH/SUB/BA/03)		

DENSITY CALCULATION

TOTAL NOS. OF D.U	= 635
POPULATION	= 635X5 = 3175
SER. PERSONAL REQUIREMENT	= 10% OF TOTAL OF D.US
	= 10% OF 635
	= 63.50 SAY 64
NOS. OF SER. PERSONAL PROVIDED	= 64DU'S [IN E.W.S. BLOCKS]
POPULATION	= 64X2=128
E.W.S UNIT REQUIRED	= 15% OF (TOTAL NOS. OF D.US. + TOTAL NO. OF E.W.S UNIT)
	= 15% OF (635+112)= 15% OF 747
	= 112.05 SAY 112
NOS. OF E.W.S UNIT PROVIDED	= 112
POPULATION	= 112X2 = 224 NOS.
TOTAL POPULATION	= 3527 PERSONS
DENSITY	= 3527/13.394
	= 263.326 SAY 263 PERSONS PER ACRE
PERMISSIBLE SHOPPING AREA	= 0.5% OF SCHEME AREA = 0.5% X 54203.509
	= 271.017 M²
PROPOSED SHOPPING AREA = 216.403 M²	

PARKING DETAIL

REQUIRED NOS. OF CAR PARKING	= 100% OF TOTAL NOS. OF D.US
	= 100% OF 635 = 635 NOS.
REQUIRED NOS. OF COVD.CAR PARKING	= 50% OF TOTAL NOS. OF D.US.
	= 50% OF 635 = 318 NOS.
PROPOSED NOS. OF COVD.CAR PARKING	= 420 NOS.
PROPOSED NOS. OF SURFACE CAR PARKING	= 280 NOS.
PARKING UNDER STILT	= 64 NOS.
TOTAL	= 764 NOS.

COVERED CAR PARKING DETAIL

BLOCK	NO. OF CAR
LOWER BASEMENT	210
UPPER BASEMENT	210
PARKING UNDER STILT	64
TOTAL	484

ARCHITECT'S SIGN.

GUNINDER KALSI
(B. Arch. M.C.A.)
Regd. No. CA/85/9528

CLIENT'S SIGN.

OWNER

M/s MUDRA FINANCE Ltd.

V.I-3
D.T.P. (HQ) Member Secretary B.P.C.
S.T.P. (G) Member B.P.C.
C.T.P. (Hr.) Chairman B.P.C.

SANCTIONED

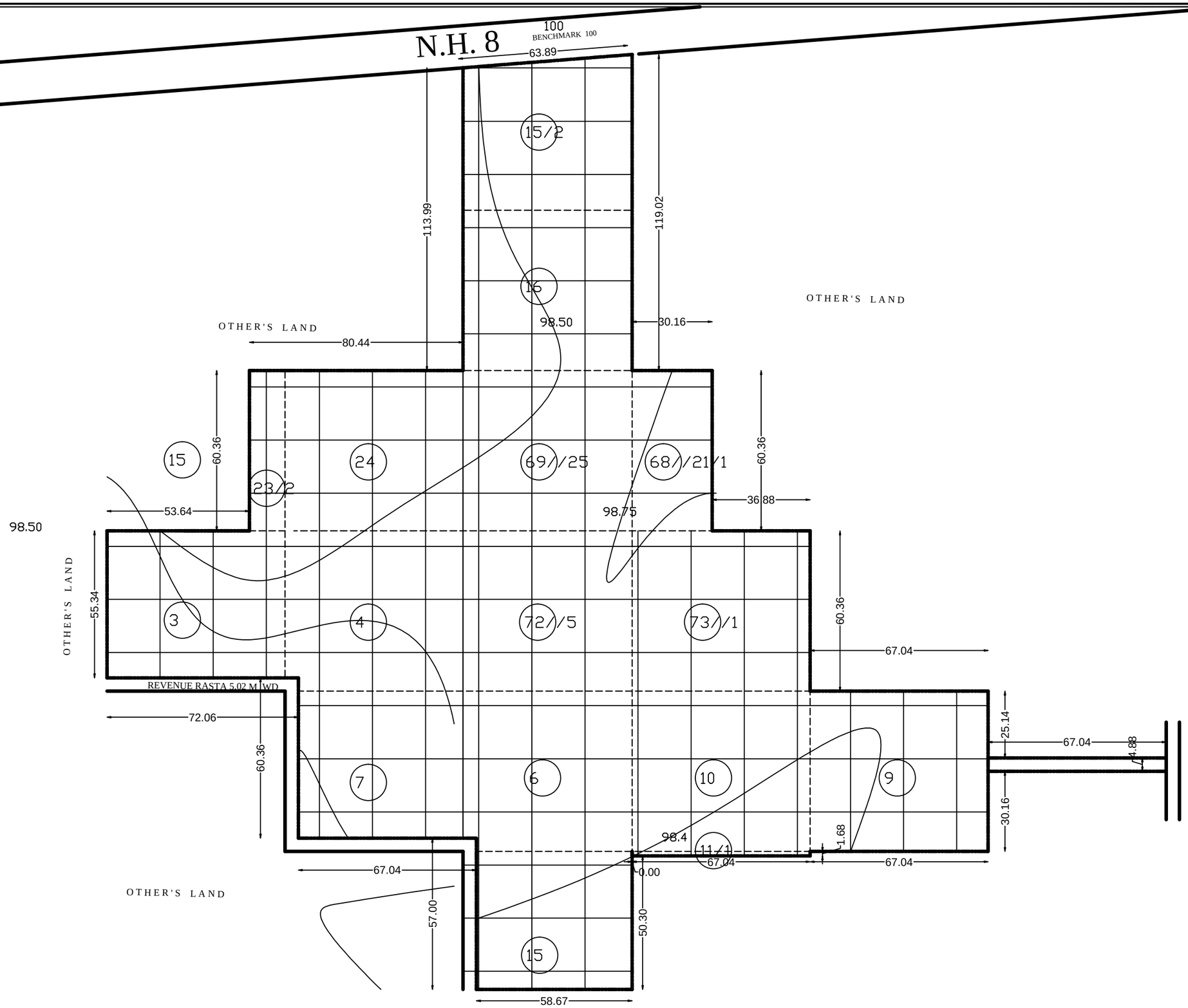
To be read in conjunction with memo No. 3401 Dtd 12-2-08

PROJECT
PROPOSED GROUP HOUSING SCHEME FOR 13.394 ACS. AT SECTOR-1, DHARUHERA

SHEET TITLE
SITE PLAN (AREA DETAIL)

DEALT	SCALE	DRG NO.
KUSH KUMAR	1:750	DH/SUB/SP/01
PROJECT INCH. G. SINGH	DATE JUL.-2007	

ARCHITECTS
VIPUL LIMITED
VIPUL TECH SQUARE
SECTOR ROAD, SECTOR-43
GURGAON (HARYANA) 122002



LEGEND

BOUNDARY WALL WITH GATE	
PLOT LIMIT	
ELECTRIC LINE	
TREE	

NOTE

1 ALL DIMENSIONS AND HEIGHTS ARE IN METRE.
2 THE NORTH LINE INDICATED IS A MAGNETIC NORTH DIRECTION.

PLOT AREA

54219.68 SQ.M. OR 13.3975ACRES

SL. NO.	DATE	AS PER	REMARKS
02			
01			

REVISED ON

PROJECT
PROPOSED GROUP HOUSING SITE
AT DHARUHERA , REWRI ,HARYANA

OWNER :
M/S MUDRA FINANCE LTD.

TITLE
TOPOGRAPHICAL & CONTOUR SURVEY PLAN

CONSULTANTS
VASTU CONSULTANTS
ARCHITECTS AND ENGINERS & PLANNERS
H-1/10 , F.F. MALVIYA NAGAR, N. DELHI-110017
Ph : 2-6681329, Mob.-981873158825,9312258825Fax-26671443
E-mail:- rsunilvastu66@yahoo.com

SCALE	DRWAN BY
1 : 500	K. SHARMA
CHECKED BY	DATE: APRIL 2006
	DRG. NO.: 53 / C-2 / TSP / REE /01/1

Annexure 9

Water Requirement Details:

During Operation Phase - During operation phase, Water requirement will be met by HUDA. Total 628 KLD water will be required including 352 KLD fresh water and 276.05 KLD treated water from STP.

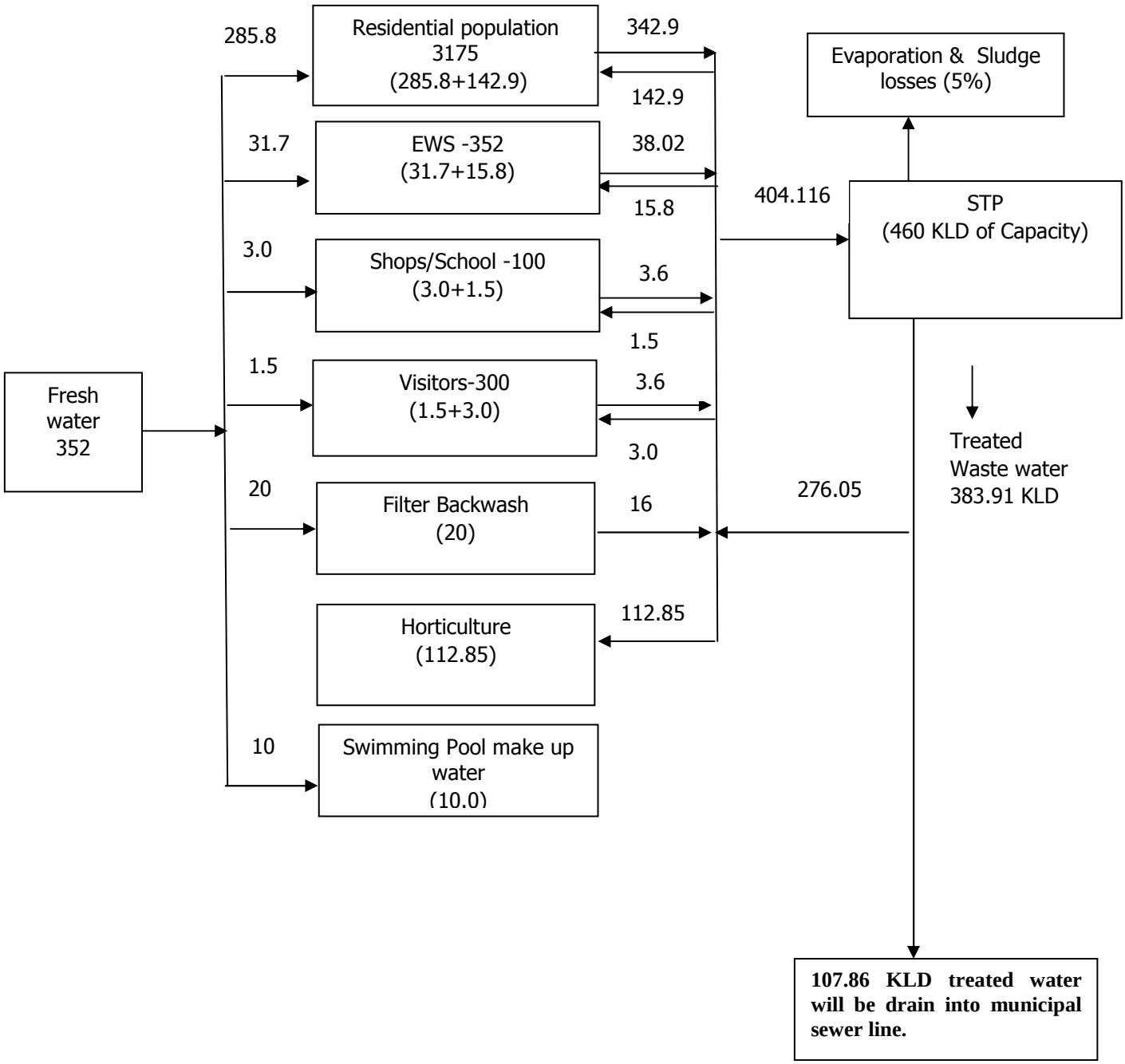
Table 3: Water balance for Operational Phase

S. No	Description	Per capita water demand	Fresh Water requirement (KLD)	Treated Water (KLD)	Total Water (KLD)	Waste Water (KLD) @80 %
1.	Residential apartments (3175 persons)	135 lit/day	285.8	142.9	428.63	342.9
2.	EWS (352 persons)	135 lit/day	31.7	15.8	47.52	38.02
3.	Shops/School (100 persons)	45 lit/day	3	1.5	4.5	3.6
4.	Visitors (300 persons)	15 lit/day	1.5	3.0	4.5	3.6
5.	Filter Backwash	45 lit/day	20	-	20	16
6.	Horticulture	5.5 lit/sqm	-	112.85	112.85	-
7.	Swimming Pool make up water	10% of total requirement	10	-	10	-
Total			**352**	**276.05**	**628**	**404.116-20.21 (sludge & evaporation loss) = 383.91**

Waste water Generation and Treatment:

It is estimated that about 383.91 KLD of waste water will be generated during operation phase, which will be treated in sewage treatment plant of 460 KLD capacity and reused and recycled for green area, road washing and flushing purpose. Remaining 107.86 KLD treated waste water will be discharged into municipal sewer line.

Figure – 1 Water Balance Diagram



Annexure 10 a

Storm Water Management

Rainwater Harvesting Plan

Adequate rainwater harvesting pits will be provided.

Rain water outlets shall be provided at various locations on terrace based on the criteria that minimum 1% slope to be provided towards rain water outlet from the ridges.

The rainwater collected from the rooftop areas within the project area will be conveyed into the rainwater harvesting system consisting of Desilting-cum-Filter Chamber, Oil & Grease Separators and finally recharges the groundwater.

Details of maximum storm water generated

Description	**Area (m^2)**	**Maximum rainfall intensity (m/h)**	**Runoff coefficient**	**Total storm water (cum/h)**
Roof area	8124.836	0.045	0.8	292.49
Green area	20597.33	0.045	0.2	185.37
Paved area	14861.34	0.045	0.5	334.380
Total				**812.24**

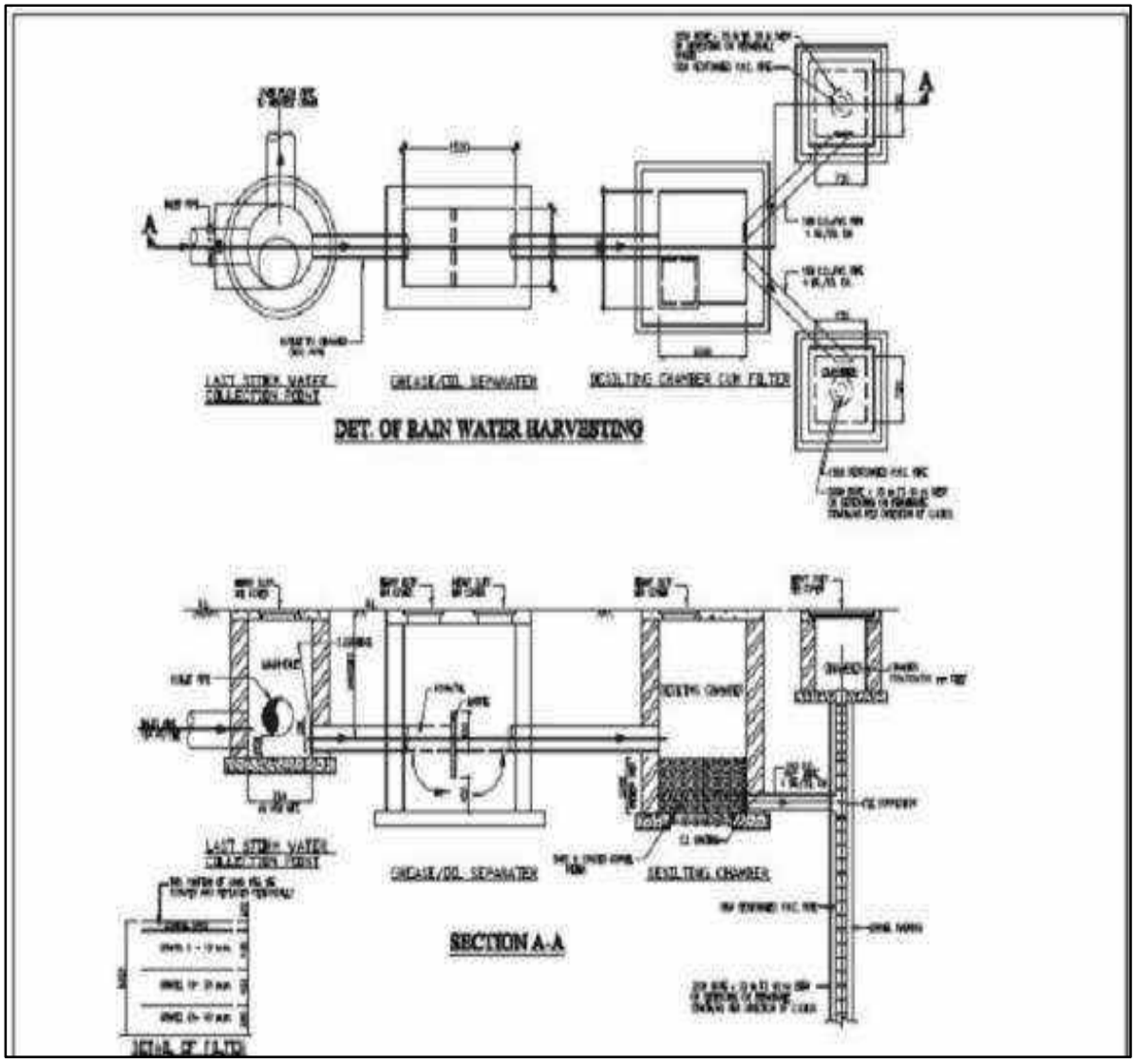
Total 5 number of rain water harvesting pits will be developed. 812.24 m^3 is the maximum generated runoff for 1 hour. Hence peak runoff can be taken for maximum 20 minutes. Hence (812.24/3 =270.74 m^3, say 271 m^3) of storage capacity will be required.

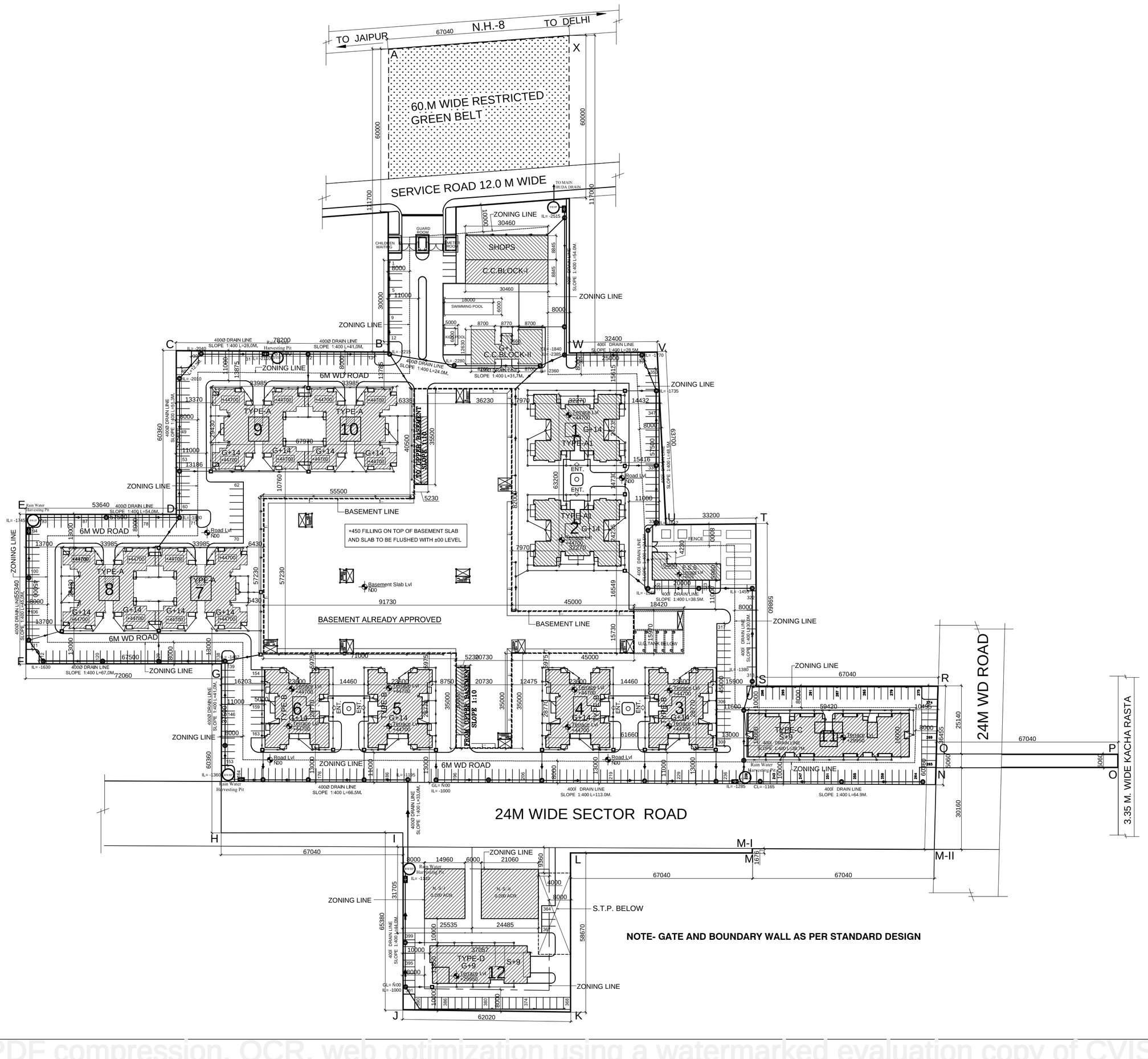
Details of Rainwater Harvesting Pits

Number of pits	5
Size of pits	3.5 x 4 x 4 (56 m^3)
Size of Bore	350mm dia
Size of pipe	150mm dia
Total volume of storage	56 X 5 = 280 m^3

So, storage capacity provided for peak hour runoff. Hence there will be no overflow during maximum rain fall.

Rain Water Harvesting Pit design -





NOTE- GATE AND BOUNDARY WALL AS PER STANDARD DESIGN

Annexure 11

SEWAGE TREATMENT PLANT of 475 KLD:

Sewage Treatment Plant of capacity 475 KLD based on Activated Sludge Process using Extended Aeration technology shall be provided in the project premises.

Sewerage System:

Sewage treatment Plant having a capacity of 475 KLD will be provided within the Project premises. The Sewage treatment Plant based on Activated Sludge Process using Extended Aeration technology will be designed to treat a sewage quantity of 488.82 cu. mt/day having characteristics as mentioned below.

Process Description:

The activated sludge process is an aerobic, biological sewage treatment process. In this process, raw sewage is aerated in an aeration tank for some hours. During the aeration, the microorganisms in the sewage multiply by assimilating part of the influent organic matter. As a result of this process, biomass is generated in the aeration tank which is generally flocculent and quick setting. It is separated from the aerated sewage in the secondary settling tank and is recycled continuously to the aeration tank. The mixture of recycled sludge and sewage in the aeration tank is referred as "Mixed Liquor". The mixed liquor suspended solids (MLSS) content is generally taken as an index of mass of active microorganisms in the aeration tank.

Table 1: Waste water quality

Parameters	Value Before Treatment	Value after Treatment
pH	7.5 – 8.5	6.0 – 8.5
B.O.D	250 – 450 mg/L	Less than 30 mg/L
Suspended Solids	250 – 400 mg/L	Less than 30 mg/L
C.O.D	600 – 800 mg/L	Less than 60 mg/L
Oil & Grease	50 – 100 mg/L	Less than 10 mg/L

Main Components of Extended Aeration Method are:

1. Equalization Tank
2. Aeration Tank
3. Secondary Settling Tank
4. Sludge Holding Tank
5. Chlorination Tank
6. Treated waste water Tank
7. Soft Water Tank
8. Electro Mechanical Tank

The Sewage treatment plant shall be designed to receive continuous sewage inflow within the plant room allocated on the site plan. The ease of maintenance and operation is of utmost importance in the design of sewage treatment Plant. The location of sewage treatment Plant is given below in Figure 2.

Inlet Screen Chamber -

Raw sewage shall flow into the inlet screen chamber by gravity. Large solid particles shall be intercepted by a fine step screen. A manual screen shall be installed in parallel with the screw screenas a standby screen when the step screen is under maintenance.

Equalization Tank -

The sewage enters in the collection cum equalization Tank for flow and sewage quality equalization.

Aeration Tank –
The sewage will go to aeration tank for high MLSS and low F/M. Sewage shall be retained in the aeration tank for the minimum of 24 hours and subjected to biochemical oxidation by fine bubbles aeration.

Clarifier Tank –
The sewage after biooxidation shall enter the rectangular flat bottom sedimentation tank where the sludge effectively settles to the tank bottom. The clear effluent shall weir into the chlorination chamber. The activated sludge collected in the sludge tank shall be returned to the aeration tank for further oxidation of the incoming organic matter by means of automatic siphoning/pumping.

Chlorination Tank (CCT) –
Chlorine solution shall be metered into the sewage by an electric dosing pump paced according to the sewage inflow. The sewage shall be retained in the baffle walled chlorine tank for a minimum of two hours for effective disinfection prior to discharge.

Tertiary Treatment –

Treated water from Chlorine Contact Tank (CTT) will be pumped to Multi Grade Filters (MGF) for removal of suspended solids and turbidity. This filter shall be provided with sand and anthracities filtering media. After MGF, the treated water will be passed through the activated carbon filter (ACF) for further polishing and removal excess chlorine. After ACF, the treated water shall be stored in treated water tank.

Treated water Tank –

This tank is for the storage of treated water from the tertiary treatment unit. The treated water is to be used for the irrigation of green area.

Soft Water Tank –

After ACF, the treated water passes through softener. This tank is for the final storage of the soft water coming from the softener unit. The treated soft water is to be used for the cooling tower purpose.

Sludge Handling/ dewatering/disposal –

Excessive sludge shall be stored in the sludge holding tank for final dewatering and disposal through screw pump and filter press. This tank is for the storage of treated water from the tertiary treatment unit. The treated water is to be used for flushing purposes.

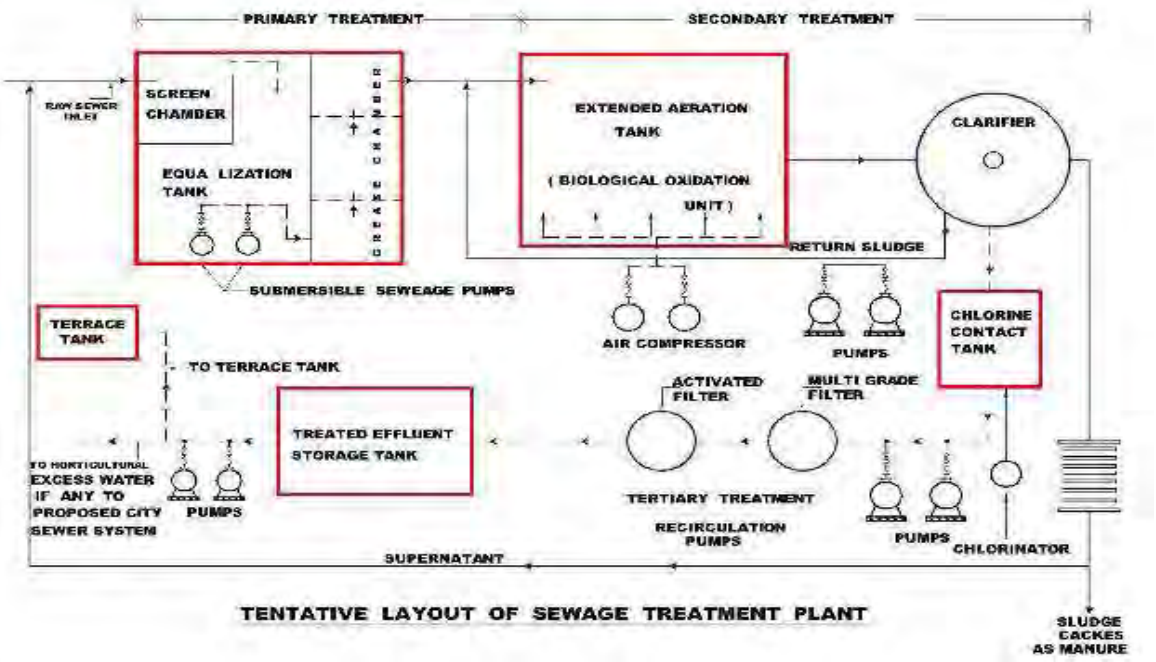


Figure 1: Schematic Diagram of STP

Annexure 12

Parking Facilities:

Adequate surface parking and basement parking are provided.

- **Parking required as per Zoning Plan-**

Description	Total ECS required
For Residential Building **(@ 1 ECS per DU excluding EWS)** =For 635 Dwelling Units	**635 ECS**
Covered Car Parking (50% of total 635 ECS)	**318 ECS**

- **Parking Proposed-**

Description	Total ECS provided
Basement Parking (@ 1ECS/35 m^2) **Lower Basement** Total Basement area = 7,586 sqm Area required for parking = 7,350 sqm **Upper Basement** Total Basement area = 7,586 sqm Area required for parking = 7,350 sqm	**210 ECS** **210 ECS**
Stilt Parking (@ 1ECS/30 m^2) Total area required= 1440 sqm Area provided for parking = 1442.680 sqm	**48 ECS**
Surface Parking Total area required= 7,000 sqm Area provided for parking = 7,000 sqm	**280 ECS**
Total parking Provided	**420 + 48 + 280 = 748 ECS**

ANNEXURE 13

Environnent Management Plan

Introduction

The study for the proposed project has identified impacts that are likely to arise during different phases of the project. The study has also examined the extent to which the adverse impacts identified can be controlled through the adoption of mitigation measures. The Environment Management Plan describes both generic good practice measures and site-specific measures, the implementation of which is aimed at mitigating potential impacts associated with the proposed activities.

Purpose of EMP

The environment management plan is prepared with a view to facilitate effective environmental management of the project, in general and implementation of the mitigation measures in particular. The EMP provides a delivery mechanism to address potential adverse impacts and to introduce standards of good practice to be adopted for all project works. For each stage of the programme, the EMP lists all the requirements to ensure effective mitigation of every potential biophysical and socio-economic impact. For each impact or operation, which could otherwise give rise to impact the following information is presented:

- A comprehensive listing of the mitigation measures (actions) that the project proponent will implement;
- The parameters that will be monitored to ensure effective implementation of the action;
- The timing for implementation of the action to ensure that the objectives of mitigation are fully met.

Table 1: Environmental Management Plan

S. No	Potential Impact	Action	Parameters for Monitoring	Timing
I. Construction Phase				
1.	Air Emissions	All equipments are operated within specified design parameters.	Random checks of equipment logs/ manuals	Construction activities
		Vehicle trips to be minimized to the extent possible	Vehicle logs	During site clearing and construction activities
		Any dry, dusty materials stored in sealed containers or prevented from blowing.	Absence of stockpiles or open containers of dusty material	Construction activities
		Compaction of soil during various construction activities	Construction logs	Construction activities

S. No	Potential Impact	Action	Parameters for Monitoring	Timing
		Ambient air quality within the premises of the proposed unit to be monitored.	The ambient air quality will conform to the standards for SPM, SO_2 and NO_x.	As per requirement of State Pollution Control Board
2.	Noise	List of all noise generating machinery onsite along with age to be prepared.	Equipment logs, noise reading	During construction phase
		Equipment to be maintained in good working order.	Equipment logs, noise reading	During construction phase
		Night working to be minimized	Working hour records	Construction activities
		Generation of vehicular noise	Maintenance records of vehicles	During construction phase
		Implement good working practices (equipment selection and siting) to minimize noise and also reduce its impacts on human health (ear muffs, safe distances, and enclosures).	Site working practices records, noise reading	During construction phase.
		Acoustic mufflers / enclosures to be provided in large engines	Mufflers / enclosures in place.	Prior to use of equipment.
		Noise to be monitored in ambient air within the plant premises.	Noise reading	As per requirement of State Pollution Control Board or quarterly whichever is lesser.
		The Noise level will not exceed the permissible limit both during day and night times.		
		All equipment operated within specified design parameters.	Random checks of equipment logs/ manuals	During construction phase
		Vehicle trips to be minimized to the extent possible	Vehicle logs	During construction phase
3.	Wastewater Discharge	No untreated discharge to be made to surface water, groundwater or soil.	No discharge hoses in vicinity of watercourses.	During construction phase
		The discharge point should be selected properly and sampling and analysis should be undertaken prior to discharge	Discharge norms for effluents as given in consent to operate by State Pollution Control Board.	During construction phase

S. No	Potential Impact	Action	Parameters for Monitoring	Timing
		Take care in disposal of wastewater generated such that soil and groundwater resources are protected.	Discharge norms for effluents as given in consent to operate by State Pollution Control Board.	During construction phase
4.	Soil Erosion	Minimize area extent of site clearance, by staying within the defined boundaries	Site boundaries not extended / breached as per plan document.	During construction phase
		Protect topsoil stockpile where possible at edge of site.	Effective cover in place.	During construction phase
5.	Drainage and effluent management	Ensure drainage system and specific design measures are working effectively.	Visual inspection of drainage and records thereof	During construction phase
		The design to incorporate existing drainage pattern and avoid disturbing the same.		
6.	Waste management	Implement waste management plan that identifies and characterizes every waste arising associated with proposed activities and which identifies the procedures for collection, handling and disposal of each waste arising.	Comprehensive Waste Management Plan in place and available for inspection on-site. Compliance with MSW Rules, 1998 and Hazardous Wastes (Management and Handling Rules), 2003	Prior to site clearance
7.	Non-routine events and accidental releases	Plan to be drawn up, considering likely emergencies and steps required to prevent/limit consequences.	Mock drills and records of the same	During construction phase
8.	Environmental Management Cell/Unit	The Environmental Management Cell/Unit is to be set up to ensure implementation and monitoring of environmental safeguards.	A formal letter from the management indicating formation of Environment Management Cell	During construction phase
II. Operation Phase				
9.	Air emissions	Stack emissions from DG set to be optimized monitored	The ambient air quality will conform to the standards for PM10, PM2.5, SO_2 and NOx as given by State Pollution Control Board.	During operation phase

S. No	Potential Impact	Action	Parameters for Monitoring	Timing
		Ambient air quality within the premises of the proposed unit to be monitored.	The ambient air quality will conform to the standards for PM10, PM2.5, SO_2 and NOx as given by As per requirement of State Pollution Control Board.	During operation phase
		Exhaust from vehicles to be minimized by use of fuel-efficient vehicles and well maintained vehicles having PUC certificate.	Vehicle logs to be maintained	During operation phase
		Vehicle trips to be minimized to the extent possible	Vehicle logs	During operation phase
10.	Noise	Noise generated from operation of DG set to be optimized and monitored	Maintain record of operations	During operation phase
		DG sets to generate less than 75 dB(A) Leq at 0.5 m from the source	Maintain record of operations	During operation phase
		DG sets are to be provided at basement with acoustic enclosures with height of chimney as specified by SPCB	Maintain record of operations	During operation phase
		Generation of vehicular noise	Maintain record of vehicles	During operation phase
11.	Wastewater discharge	No untreated discharge to be made to surface water, groundwater or soil.	No discharge hoses in vicinity of watercourses	During operation phase
		Take care in disposal of wastewater generated such that soil and groundwater resources are protected	Discharge norms for effluents	During operation phase
12.	Drainage and effluent management	Ensure drainage system and specific design measures are working effectively.	Visual inspection of drainage and records thereof	During operation phase
		Design to incorporate existing drainage pattern and avoid disturbing the same.	Visual inspection of drainage and records thereof	During operation phase
13.	Indoor air contamination	Contaminants such as CO, CO_2 and VOCs to be reduced by providing adequate ventilation.	Monitoring of indoor air contaminants such as CO, CO_2 and VOCs.	During operation phase
14.	Energy Usage	Energy usage for air-conditioning and other activities to be minimized	Findings of energy audit report	During operation phase

S. No	Potential Impact	Action	Parameters for Monitoring	Timing
		Conduct annual energy audit for the buildings		
15.	Emergency preparedness, such as fire fighting	Fire protection and safety measures to take care of fire and explosion hazards, to be assessed and steps taken for their prevention.	Mock drill records, on site emergency plan, evacuation plan	During operation phase
16.	Environmental Management Cell/Unit	The Environment Management Cell/Unit to be set up to ensure implementation and monitoring of environmental safeguards.	A formal letter from the management indicating formation of Environment Management Cell	During operation phase

Environment Management Cell

The responsibilities of the various members of the environment management cell are given in following Table:

Table 2: Environment Management Cell

S. No	Designation	Proposed responsibility
1.	Senior Executive Director	Environmental policy and directions
2.	Advisor (Environment)	Overall responsibility for environment management and decision making for all environmental issues and in-charge of operation of environment management facilities, Ensuring legal compliance by properly undertaking activities as laid down by various regulatory agencies from time to time and interacting with the same
3.	Site Engineers	Secondary responsibility for environment management and decision making for all environmental issues, Ensure environmental monitoring as per appropriate procedures.

Environmental Monitoring Plan

Environment monitoring plan is given in following table:

Table 3. Environment Monitoring Plan

S. No.	Activity	Schedule
Air Pollution Monitoring		
1.	Ambient air monitoring of parameters specified by CPCB in their air consents from time to time within the premises	Once three month
2.	Ambient air monitoring of parameters specified by CPCB in their air consents from time to time at stations outside the premises	Once every season at each station
Water Pollution Monitoring		
3.	Monitoring of one sample of groundwater at site/nearby location. Parameters are essential parameters as per IS: 10500:1991.	Once in every season
Noise Quality Monitoring		
4.	Noise in the ambient atmosphere inside the premises	Once in a year
Solid Waste Generation Monitoring/Record Keeping		
5.	Records of generation, handling, storage, transportation and disposal of other solid, aqueous and organic hazardous wastes as required by hazardous waste authorization	To be updated daily
Environmental Audit		
6.	Environmental Statement under the EP (Act), 1986	Once in a year

Projected Expenditure on Environmental Matters

Table 4 gives the expenditure to be incurred by the project proponent on environmental matters.

Table 4: Expenditure on Environmental Matters

Item	Cost (Rs. lacs)	
	Capital	**Recurring**
Air pollution control	15	0.6
Water pollution	225	10.5
Solid and hazardous waste management	6.77	2.90
Environmental monitoring	-	3
Green belt	12.02	4.78
Total	258.79	21.78

Green Belt Plan

General Principles in Greenbelt Design

Plants grown in such a way so as to function as pollutant sinks are collectively referred as greenbelts[1]. These plants should also provide an aesthetic backdrop for persons using the site and for the surrounding community.

General principles in greenbelt design considered for this study are:

- Type of pollution (air, noise, water and land pollution) likely from the activities at the site
- Agro-climatic zone and sub-zone where the greenbelt is located (and hence the plant species which can be planted in the area).
- Water quantity and quality available in the area
- Soil quality in the area

Greenbelt is designed to minimize the predicted levels of the possible air and noise pollutants. While designing the scheme the following facilities are considered:

- Site perimeter and approach road
- Along the internal roads
- In and around the office area

To ensure a permanent green shield around the periphery planting is recommended in two phases.

- In the first phase one row of evergreen and fast growing trees (which grows up to 10-15m) with maturity period of around three years shall be planted at 3.0 meter interval along with fast growing

[1] Central Pollution Control Board, 2000, "Guidelines for Developing Greenbelts" *pp 2*

ground covers to enhance the water holding capacity, improve the organic content and check the soil erosion.

- In the second phase after eighteen months, second row of trees with large leaf surface area with large ever green canopy and longer life span shall be planted at 6.0 meters intervals.

Greenbelt Design for Site

The selection of the trees is based on their phenology (thus road side trees will not have leaf fall during summer and rainy seasons when shade is most needed). Trees with more litter fall have been avoided.

The selection criteria of the species are based on pollution mitigation capacity (including particulate matter), large leaf surface area2 deep root system and less litter fall. Faster growing trees with lighter canopy will be planted alternatively with relatively slow growing trees with wider canopy. Trees of about 6.0m heights will be planted at 4.5m intervals, 2.5m away from the road curbing as per CPCB guidelines. Trees will be planted along the outer periphery at centerline of road between the set back line and the boundary of the plots. Palms and shrubs will be planted along the roads and around recreational lawns.

Greenbelt Management

It is presumed that the selected plants will be grown as per normal horticultural practice and the authorities responsible for the plantation will make adequate provisions for water and protection of the saplings. A budgetary cost estimate is also prepared for greenbelt development.

Water source

Water tankers may also be used at the initial stages of development of the plant.

Irrigation method

Water hydrants may be installed at 50 m intervals to irrigate area under shrubs and ground covers.

Improving Indoor Air Quality

The indoor air quality can be improved by any of the following:

Ventilation

- Include the use of natural, dilution, local exhaust, or increased ventilation efficiency. The most effective engineering control for prevention of indoor air quality problems is assuring an adequate supply of fresh outdoor air through natural or mechanical ventilation.
- When possible, use local exhaust ventilation and enclosure to capture and remove contaminants generated by specific processes. Room air in which contaminants are generated should be discharged directly outdoors rather than recirculated.
- Outside air intakes should not be located in close proximity to potential sources of contamination (automobile garages, building exhausts, and roadways).

[2] As per CPCB guidelines

Work Place Recommendations

- Eliminate or control all known and potential sources of microbial contaminants by prompt cleanup and repair of all areas where water collection and leakage has occurred including floors, roofs, drain pans, humidifiers containing reservoirs of stagnant water, air washers etc.
- Remove and discard porous organic materials that are contaminated (e.g., damp insulation in ventilation system, ceiling tiles, and carpets).
- Clean and disinfect non-porous surfaces where microbial growth has occurred
- Maintain indoor air relative humidity below 60%
- Adjust intake of outdoor air to avoid contamination from nearby soil, vegetable debris unless air is adequately conditioned.
- Isolate, if feasible, areas of renovation, painting, carpet laying, pesticide application, etc., from occupied areas that are not under construction.
- Supply adequate ventilation during and after completion of work to assist in diluting the contaminant levels.
- Eliminate or reduce contamination of the air supply with cigarette smoke by banning smoking or restricting smoking to designated areas which have their air discharged directly to the outdoor rather than recirculated.

Safety Aspects of the Project

The following needs to be implemented:

Fall Protection

- The Contractor is required to provide fall protection to employees who are working at heights equal to or greater than 1.8 m. Fall protection can be in the form of perimeter protection such as guardrails and toe rails, personal protective equipment (PPE), a safety monitoring system, or a fall protection plan. Activities that require personal fall protection systems include steel erection bolting, riveting, fitting-up and plumbing-up, work over water and some deep excavation work.
- On buildings or structures not adaptable to temporary floors, and where scaffolds are not used, safety nets will be installed and maintained whenever the potential fall distance exceeds two storey.
- The PPE standard should cover occupational foot, head, hearing, and eye protection.
- Foot Protection: If machines or operations present the potential for foot injury, the Contractor must provide foot protection, which is of safe design and construction for the work to be performed. Workers and visitors should not be allowed on a construction site without safety boots.
- Head Protection: If head hazards remain after all steps have been taken to control them (safety nets for work at heights, proper housekeeping), the Contractor must provide employees with appropriate head protection.
- Noise Protection: Workers should be wearing hearing protection devices (ear plugs, ear muffs, canal caps) that are in good condition whenever they are involved in noisy activities.
- Eye Protection: When machines or operations present potential eye injury from physical or chemical elements, the Contractor must select, provide, maintain and required affected employees to use appropriate eye protection. Eye protection (safety glasses and goggles, face shields and welding helmets) must be adequate and reasonably comfortable.
- To the greatest extent possible, working surfaces must be kept dry to prevent slips and falls and to reduce the chance of nuisance odors from pooled water.
- All equipment and materials should be stored in designated storage areas that are labeled as such.

Ladders and Stairs

- The Contractor is required to inspect and maintain all ladders and temporary/portable steps to ensure that they are in good working condition.
- Portable ladders used for access to an upper landing surface must extend a minimum of 1.8 m above the landing surface, or where not practical, be provided with grab rails and be secured against movement while in use.
- All ladders must be used only on stable and level surfaces unless secured to prevent accidental movement. Ladders must not be used on slippery surfaces unless secured or provided with slip-resistant feet to prevent accidental movement.
- The Contractor should provide a ladder (or stairway) at all work points of access where there is a break in elevation of 0.5 m or more.
- When there is only one point of access between levels, it must be kept clear to permit free passage by workers. If free passage becomes restricted, a second point of access must be provided and used. At all times, at least one point of access must be kept clear.
- All required stairway and ladder fall protection systems must be provided and installed before employees begin work that requires them to use stairways or ladders.

Scaffolds

- Access to Scaffolds - access to and between scaffold platforms more than 0.6 m above or below the point of access will be made by portable/attachable ladders or ramps.
- Employees must never use makeshift devices, such as boxes and barrels, to increase the scaffold platform working level height.

Trenching and Excavation

- The area around the trench/excavation would be kept clear of surface encumbrances.
- Water should not be allowed to accumulate in the excavation.
- Adjacent structures would be shored in accordance with the design documents to prevent collapse.
- Guardrails or some other means of protecting people from falling into the trench/excavation would be present.
- The trench or excavation would be shored or sloped to prevent cave-ins.

Electrical Safety

- If work has to be done near an overhead power line, the line must be de-energized and grounded before work is started.
- A licensed electrician would have completed all temporary wiring and electrical installations required for construction activities.
- Fuses and circuit breakers would be used to protect motherboards, conductors and equipment
- Extension cords for equipment or as part of a temporary wiring system will not be damaged or compromised in any way and insulation must be of the highest grade.
- Anytime electrical equipment is deactivated for repair, or circuits are shut off, the equipment will be locked out and tagged at the point where it can be energized.
- Temporary lights may not be suspended by their cords.
- The Contractor would provide the necessary safety equipment, supplies and monitoring equipment to their personnel.

Cranes

- A competent person has been designated to supervise activities that require the use of cranes.
- Cranes would not be operated near any power lines.
- All picks would be carefully planned to ensure that the crane adequately hoist the load.
- The hoisting signals would be posted on the exterior of the crane.

Occupational Noise Exposure

- The Contractor should implement engineering controls to reduce noise levels.
- The Contractor should provide hearing protection to employees that are exposed to noise levels above the permissible limit.

Welding and Cutting

- The Contractor's employees would be trained in hot work procedures.
- There should be adequate ventilation to reduce the build up of metal fume.
- The hot work operators would use proper personal protective equipment (i.e., welding helmet, burning goggles, face shield, welding gloves, and apron).
- There would be a fire extinguisher present at all welding and burning activities.
- Extinguishers would also be placed at locations where slag and sparks may fall.
- Oxygen and flammable gas bottles are separated by at least 7 m when not in use.
- The Contractor would control the release of gases, vapors, fumes, dusts, and mists with engineering controls (e.g., adequate ventilation).
- General Guidelines
- Signs and symbols would be visible during any construction activity that presents a hazard. Upon completion of such activity, the postings must be removed immediately.
- The Contractor would post specific DANGER signs when an immediate hazard exists and specific CAUTION signs when the potential for a hazard exists. EXIT, NOTICE and specific safety signs may also be posted in the work area.
- Signage for traffic control, including directional signs, are applicable when the Contractor is disrupting traffic along a public way.
- Danger signs are posted at all immediate hazards (i.e. Danger: Open Hole).
- Caution signs are posted at all potential hazards (i.e. Caution: Construction Area, Caution: Buried Cable).
- The floor that is being used as the erection floor must be solidly planked or decked over its entire surface except for access openings.
- Every floor, working place and passageway would be kept free from protruding nails, splinters, holes or loose boards.
- Combustible scrap and debris (wood, clearing/grubbing material) would be removed from the site daily or should be securely stored in covered containers.
- The Contractor would have a spill prevention control and countermeasure plan that limits the risk of releases of oil or hazardous materials to the environment

Solid waste generation/ Disposal:

Solid waste generated in Project area will be 1.8 ton/day and mainly of domestic nature. Detail of solid waste generation is given in Table below. Solid waste will be segregated into biodegradable and non-biodegradable wastes and collected in separate bins. The non-biodegradable wastes will be sold to recyclers and the biodegradable wastes will be collected and disposed into composting pits at site.

Table: Solid Waste Generation

Nature of solid wastes	Biodegradable waste: Waste vegetables and foods Non biodegradable waste: Papers, cartons, thermocol, plastics, polythene bags, glass etc.
Segregation	The solid wastes generated (1.8 T/day will be collected and segregated into organic (1.1 T/day) and inorganic components and collected in color coded separate bins in individual flats.
Recycling	The inorganic wastes comprising recyclable materials, such as paper, plastic, glass etc., will be sold to prospective buyers. The organic biodegradable wastes (waste vegetables, foods etc.) will be transferred into the manure

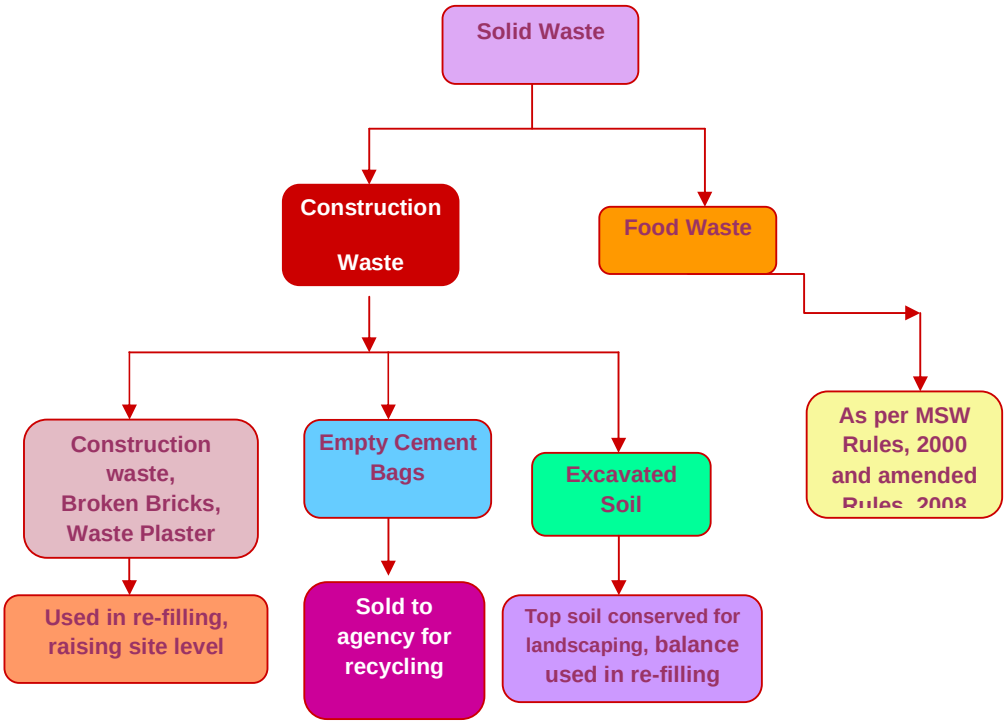
Solid Waste Management Plan:

Solid waste would be generated both during the construction as well as during the operation phase. It will be heterogeneous mixture from commercial and domestic activity. The waste mainly comprises of organic food waste as well as inorganic waste such as plastic, leather, rubber, glass etc. Apart from these organic wastes like food waste, garden waste etc will also be generated at the project site.

Solid Waste Generation and Management during Construction 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. The following steps are proposed to be followed for the management solid waste:

- Construction yards are proposed for storage of construction materials.
- The excavated material such as topsoil and stones will be stacked for reuse during later stages of construction
- Excavated top soil will be stored in temporary constructed soil bank and will be reused for landscaping of the project**.**
- Remaining soil shall be utilized for refilling / road work / rising of site level at locations/ selling to outside agency for construction of roads etc.



Solid Waste Management Scheme (Construction Phase)

Solid Waste Generation and Management during Operational Phase:

It is estimated that approximately 1.8 tons per day will be generated from project premises after the commencement of operation phase. This waste will have majorly Stationary waste, some fraction of food waste and other non-biodegradable waste which will be segregated and only the biodegradable perishable waste will be converted in to vermin compost and used in horticulture.

Following arrangements will be made at the site in accordance to Municipal Solid Wastes (Management and Handling) Rules, 2000 and amended Rules, 2008.

❖ **Collection and Segregation of waste**

1. For commercial waste collection, adequate number of colored bins (Green and Blue & dark grey bins– separate for Bio-degradable and Non Bio-degradable) are proposed to be provided at the strategic locations of the commercial area.
2. Litter bin will also be provided in open areas like parks etc.

❖ **Treatment of waste**

- Bio-Degradable wastes

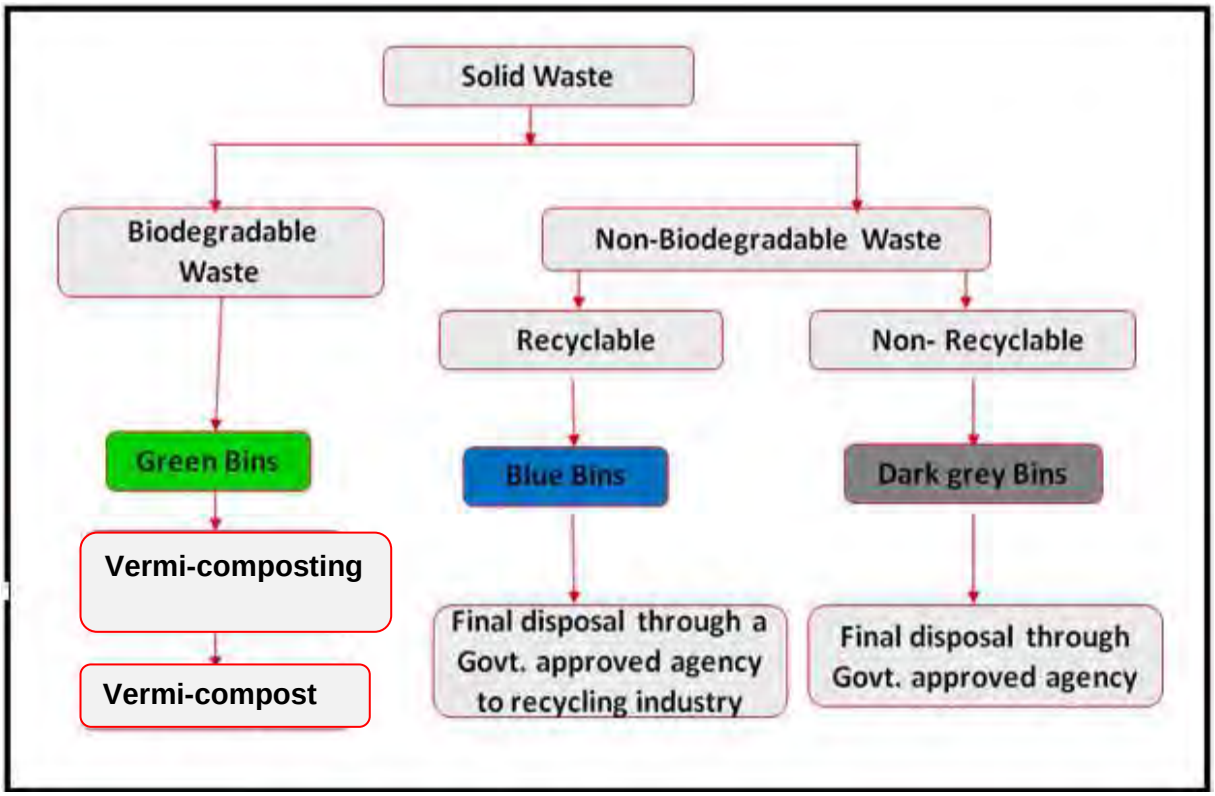
1. Bio-degradable waste will be subjected to vermin-composting and the vermin-compost will be used as manure for gardening purposes.
2. STP sludge is proposed to be used for horticultural purposes as manure.

- Recyclable wastes: Recyclable wastes like paper, plastic, metals etc. will be sold off to recyclables.

❖ **Disposal**

Recyclable and non-recyclable wastes will be disposed through Govt. approved agency. Hence, the Municipal Solid Waste Management will be conducted as per the guidelines of Municipal Solid Wastes (Management and Handling) Rules, 2000 and amended Rules, 2008.

A Solid waste management Scheme is depicted in the following figure:



Solid Waste Management Scheme (Operation Phase)

Vermi-composting

Vermicomposting is a simple biotechnological process of composting, in which certain species of earthworms are used to enhance the process of waste conversion and produce a better end product. Vermicomposting differs from composting in several ways. It is a mesophilic process, utilizing microorganisms and earthworms that are active at 10–32°C (not ambient temperature but temperature within the pile of moist organic material). The process is faster than composting; because the material passes through the earthworm gut, a significant transformation takes place, whereby the resulting earthworm castings (worm manure) are rich in microbial activity and plant growth regulators, and fortified with pest repellence attributes as well! In short, earthworms, through a type of biological alchemy, are capable of transforming garbage into 'gold' .

Importance of vermi-compost

Earthworms consume various organic wastes and reduce the volume by 40–60%. Each earthworm eats about 0.5 to 0.6 g, eats waste equivalent to its body weight and produces cast equivalent to about 50% of the waste it consumes in a day. These worm castings have been analyzed for chemical and biological properties. The moisture content of castings ranges between 32 and 66% and the pH is around 7.0. The worm castings contain higher percentage (nearly twofold) of both macro and micronutrients than the garden compost (Table 1).

Table 1. Nutrient composition of vermicompost and garden compost.

Nutrient element	Vermicompost (%)	Garden compost (%)
Organic carbon	9.8–13.4	12.2
Nitrogen	0.51–1.61	0.8
Phosphorus	0.19–1.02	0.35
Potassium	0.15–0.73	0.48
Calcium	1.18–7.61	2.27
Magnesium	0.093–0.568	0.57
Sodium	0.058–0.158	<0.01
Zinc	0.0042–0.110	0.0012
Copper	0.0026–0.0048	0.0017
Iron	0.2050–1.3313	1.1690
Manganese	0.0105–0.2038	0.0414

Source: Vermi-composting:Recycling Wastes into Valuable Organic Fertilizer. SAT eJournal, ,Volume 2(1), August 2006.

Species Suitable for Vermicomposting‥

Earthworms are epigeic (surface dwellers), endogeic (burrow up to 15 cm deep) or anecic (burrow vertical channels, about 1 m deep). Epigeic species viz., *Eudrilus eugeniae, Eisenia foetida* (red wigglers) are the best adapted to ingest organic wastes.

Vermi-composting Method

Compost pit of any convenient dimension will be dugged in the backyard. The most convenient pit of easily manageable size is 2m x 0.5m x 0.9m (As per Agriculture Department, Haryana). A tank may be constructed with brick and mortar with proper water outlets. Vermibed is the actual layer of good moist loamy soil placed at the bottom, about 150 to 200 mm thick above a thin layer (50 mm) of broken bricks and coarse sand. Earthworms will be introduced into the soil, which the worms will inhabit as their home. About 100 earthworms (a combination of epigeics and anecics) will be introduced into a compost pit of about 2m x 0.5m x 0.9m, with a vermibed of about 15 to 20 cm thick. Lumps of fresh cattle dung will be placed at random over the vermibed. Then the compost pit will be layered to about 50 mm with dry leaves or preferably chopped hay/straw. For the next 30 days the pit will be kept moist by watering it whenever necessary. After the first 30 days, as above, wet organic waste has been pre-digested will be spread over it to a thickness of about 50 mm. This can be repeated twice a week. All these organic wastes can be turned over or mixed periodically with a pickaxe or a spade. Keep adding garbage till the compost pit is nearly full. Continue to keep the pit moist for another 30 to 45 days, turning over the material in the pit with care avoiding injury to the worms. Turning over will be done on every fifth or seventh day with the help of a forked spade.

Regular watering will be done to keep the right amount of moisture in the pits. In 60 to 90 days the compost should be ready as indicated by the presence of earthworm castings (vermicompost) on the top of the bed.

ALTERNATE METHOD

Four Tank System

To simplify the loading procedure for composting where the availability of organic material is not in bulk, a four-tank system can be set up based on a combination of bio-dung composting method and vermitech technique that enables continuous compost production using weeds, leaf litter and other organic waste. A tank 4m x 4m x 1m (l x b x h) is preferably made under shade of tree. This is then divided into four equal parts with 22.5cm brick walls that have vents to facilitate aeration as well as migration of earthworms from one tank to another. This unit is designed especially for the small farmer who approximately collects 20 to 30 kg of cattle or farm waste per day.

The vermin-compost produced from the process will be used as manure for Horticulture at landscape area of project site.

Reference:

- Adhunik Krashi me Vermi-compost ka Mahatwa. By Department of Agriculture, Haryana.
- Vermi-composting:Recycling Wastes into Valuable Organic Fertilizer. SAT eJournal, ,Volume 2(1), August 2006.
- www.erfindia.org

MUDRA FINANCE LIMITED

Regd. Office: G-12A, Hauz Khas, First Floor, New Delhi-110 016
Ph: +91-11-26524477 & +91-11-26527799 Fax: +91-11-26867147

CERTIFIED TRUE COPY OF THE RESOLUTION PASSED BY THE BOARD OF DIRECTORS OF MUDRA FINANCE LIMITED AT ITS MEETING HELD ON 31ST JANUARY, 2008 AT THE REGSITERED OFFICE OF THE COMPANY

RESOLVED THAT Company do pursue to obtain Electricity, Water & Sewage and Telephone Connections for its ongoing Residential Group housing prject situated at Daruhera, District Rewari, Haryana.

FURTHER RESOLVED THAT Mr. Mr. Suresh Pratap Singh, Authorised Signatory, R/o House No. 230, Saraswati Vihar, Gurgaon, be and is hereby authorized to sign and submit necessary applications, submit various documents for obtaining the aforesaid Electricity ,Water & Sewage and Telephone connections for the aforesaid project and to make declarations, affidavit, provide information as may be required thereof to the concerned department(s), State Electricity Boards, DHBVNL, HUDA, Telecommunication Dept. or other public utility authorities as may be required whether Government or Non-Government Department and to do all such acts, deeds and things as may be necessary or incidental thereto or to settle any question or doubt that may arise to obtain the aforesaid approvals or connections in relation to the above project.

RESOLVED FURTHER THAT a copy of this resolution duly certified by any Director of the Company be furnished to the concerned Authority (ies) for being acted upon."

Certified true copy
for MUDRA FINANCE LIMITED

For MUDRA FINANCE LTD.

Director

DIRECTOR

(S. P. Singh)

MUDRA FINANCE LIMITED

Vipul Tech Square, Golf Course Road, Sector -43,
Gurgaon-122 009
CIN No. U70101DL1997PLC085456

TO WHOM SO EVER IT MAY CONCERN

This is to certify that Kadam Environmental Consultants, Regd. Office at 871/B/3, Near Himalaya Machinery, GIDC Makarpura, Vadodara-390010 have been appointed as Environment Consultant for obtaining Environmental Clearance for the Expansion of Group Colony Project located in Village - Dharuhera, Sector -1, District-Rewari, Haryana.

For M/s Mudra Finance Ltd.

Suresh Pratap Singh
(Authorised Signatory)

DHBVN

DAKSHIN HARYANA BIJLI VITRAN NIGAM
OFFICE OF SUPERINTENDING ENGINEER/OPERATION CIRCLE
Singhana Road, Narnaul-123001
Distt. Mohindergarh (Haryana)
Tel: 01282-251296, fax No. 01282-250900
Email- se.narnaul@gmail.com

To

XEN/Op Division
DHBVN, Dharuhera.

Memo No. Ch-2|SOL-204-D Dated: 4/1/2012

Subject: **Sanction of new load to M/s Mudra Finance Ltd. for Vipul Garden at NH-8 Dharuhera applied vide A&A No. 40422/Bulk DS dated 16.12.2011 with connected load 1800 KW with CD 1995 KVA under 'OP' S/Division Dharuhera.**

As per recommendation made by DGM/Op Division DHBVN Dharuhera vide his office memo No. Ch. 3/SOFL-394 dated 02.01.12, sanction is hereby accorded for new load to M/s Mudra Finance Ltd. for Vipul Garden at NH-8 Dharuhera on 11 KV Switching S/Stn. M-Tech-Ist feeder and then after 11 KV Mudra Independent feeder emanating from 11 KV M-Tech S/Stn. upto the consumer premises, applied vide A&A No. 40422/Bulk DS dated 16.12.11 with CL-1800 KW & CD 1995 KVA. The sanction is accorded subject to fulfillment of following conditions and instructions of the Nigam.

1. The MMC agreement should be executed by the applicant.
2. All other formalities as requires as per instruction issued/adopted by Nigam time to time shall be completed.
3. Metering equipments including CTs of matching capacity as per specification and design of Nigam shall be provided.
4. Meter room indicated on the sketch shall be provided at the main entrance gate of the premises as per instruction issued vide sales circular No. D-11/2005 dated 13-7-05.
5. No applicant senior to the instate applicant/consumer is waiting sanction of load/extension of load.
6. Full advance consumption deposit will be taken release of connection.
7. The consumer will deposit the fixed service charges and applicant processing charges as per sales circular No. D-8/2001 and D-33/2005 respectively.
8. Documents proof in support of the identification of the authorized signatory i.e. copy of ration card, Driving license etc. shall be obtained from the applicant/consumer.
9. The consumer will be required to submit documentary proof support of ownership of load.
10. The consumer will submit no objection certificate from water and pollution control board Haryana.
11. The consumer will not raise any claims against the department for un-notified unscheduled power cuts, which are beyond the control of the department and an undertaking will be obtained from him.
12. The sanctioned load is required to be built-up, within six month from the release of the connection in terms of SMI No. 1.21 and consumer should given undertaking to the effect. If the consumer does not avail the full revised sanctioned load within above period

of six month then the revised A&A forms for the availed load verified and accepted on the basis of test report may be sent to this office/competent authorities for acceptance/sanction.

13. All instruction & sales circular of SMI issued as well as amended from time to time by the Nigam will be applicable to the applicant/consumer.
14. The applicant shall make compliance of instruction issued by Chief Engineer/Plg. And comml. HVPN Panchkula issued by memo no. R-295/Ch-48406 K-194 dated 8/2005 & instruction no. 16/2007 issued by GM/Comml. Hisar vide memo no. 17/SE/Comml./R-17/232/05 dated 21-3-07 before release of connection.
15. The compliance of instruction issued from time to time which are not incorporate in the above are required to be complied with before release.
16. The tariff shall be charged from the individual consumer if any in accordance with HERC regulation and sale instruction/circular issued by the Nigam from time to time (Only for bulk-Domestic supply).
17. The compliance of sales instruction 16/2007 read in conjunction with sales instructions No. 30/2006.
18. Apart from other provisions of instruction of Sales Manual specifically No. 21, 102, 105 and 258 applicable in this case & would be taken case of in the first instance.
19. Non-Judicial stamp worth Rs. 3/- on the left hand corner of A&A. The same shall be got affixed by the SDO before taking further action.
20. Since the HT broacher contains old instructions an additional affidavit shall be obtained from the consumer to abide by the provision of the Electricity Act. 2003 and instruction issued by the Niam there upon time to time.
21. NOC may be obtained from HVPN before release of said load from 132/66 KV Sub Station if required.
22. Sales Manual instruction amended from time to time and various sales circulars will be applicable to the consumer.
23. As per instruction No. 34/2007 issued vide CE/P&D Hisar existing independent feeder of said firm should be required with HT Arrieal Bunched Cable of appropriate size.

The A&A from along with others concerned papers are returned herewith duly accepted please.

DA/As above
Two No. New case file

SE/Op Circle
DHBVN, Narnaul

CC:

1. AGM/Op S/Division DHBVN Dharuhera.
2. M/s Mudra Finance Ltd. for Vipul Garden at NH-8 Dharuhera.

Sanctioned of load 01-2012.

हरियाणा HARYANA

Affidavit

37AA 059175

I, Suresh Pratap Singh for and behalf of the company do hereby solemnly affirm, declare and undertake as under:

I, Suresh Pratap Singh, (Authorised Signatory) of M/s Mudra Finance Ltd. having its registered office at G-12 A, First Floor, Hauz Khas, New Delhi-110016 empowered and competent to swear this undertaking as given below:

1. That M/s Mudra Finance Ltd. have planned to expand Group Housing Colony "Vipul Gardens" in Village-Dharuhera, Sector-1, District-Rewari, Haryana having its registered office at G-12 A, First Floor, Hauz Khas, New Delhi-110016 (herein after referred to as the company).

2. That the company has not commenced any construction work at the project site under expansion. We shall commence work only after obtaining the environment clearance and receipt of all applicable NOCs/permission from prescribed /competent authorities of the state and Central Government.

3. That during the construction phase, no ground water will be used and water requirement during the construction phase will be met from treated/recycled water from STP of existing phase.

4. That we will abide by the ruling given by the Hon'ble courts with regards to the extraction of ground in the notified area of Haryana.

5. That the new scientific measure will be taken to reduce the consumption of water during construction phase.

Deponent

Verification:

Verified at Gurgaon on this day of 26th March'2015 that the contents of Para no.1 to 5 of the above undertaking are true and correct to best of my knowledge and record .No part of it is false and noting has been concealed therein.

Deponent

हरियाणा HARYANA

AFFIDAVIT

37AA 059179

I, Suresh Pratap Singh for and behalf of the company do hereby solemnly affirm, declare and undertake as under:

I, Suresh Pratap Singh, (Authorised Signatory) of M/s Mudra Finance Ltd. having its registered office at G-12 A, First Floor, Hauz Khas, New Delhi-110016 empowered and competent to swear this undertaking as given below:

1. That we are owners of the proposed Expansion of Group Housing Colony (13.394 acres) in the Village-Dharuhera, District-Rewari, Haryana and there is no litigation pending against the Project.

2. That we will not encroach the revenue rasta passing through the Project area shown in the Zoning Plan and Layout Plan.

DEPONENT

VERIFICATION:

Verified at Gurgaon on this day of 26th March'2015 that the contents of Para No. 1 and Para No. 2 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

MUDRA FINANCE LIMITED

Vipul Tech Square, Golf Course Road, Sector -43,
Gurgaon-122 009
CIN NO. U70101DL1997PLC085456

12th December'2014

Ref.: MFL/14-15/117

The Executive Engineer,
HUDA Division,
Rewari

Sub.: Grant of permission for Water Connection for Group Housing Colony for an area measuring 13.394 acs. at Sector-1, Dharuhera, Distt. Rewari.

Sir,

We have been granted part permission to occupy the above project from Director General, Town & Country Planning, Haryana (Photocopy enclosed for ready reference). The requisite documents are enclosed herewith for your kind reference and further necessary action. We, now request you to grant us permission for the water connection in Master HUDA Sewer line for above said project and we will pay all dues as levied by the Deptt. for this purpose.

An early action in the subject matter would be highly appreciated.

Thanking you,

Yours Sincerely
For Mudra Finance Limited

Guninder Singh
(Authorized Signatory)
9871240588

Encl.: as stated

Executive Engineer ★ Rewari ★ HUDA Division

2/8

सेवा में,

श्री मान नायब तहसीलदार साहब,

धारूहेडा ।

विषय :- दरख्वास्त बाबत एन·ओ·सी· प्रदान करने हेतु

श्री मान जी,

प्रार्थी की जमीन गांव धारूहेडा तहसील व जिला रेवाड़ी खेवट न0-411 खाता न0-441 मु0 न0-68 किला न0-21/1(3-12) मु0 नम्बर 69 किला नम्बर 23/2(1-12) 24(8-0) 25(8-0) मु0 न0- 72 किला न0-3(7-7) 4(7-19) 5(8-0) 6(7-19) 7(7-16) 15(7-8) मु0 न0- 73 किला नम्बर 1(8-0) 8/2/1(0-13) 11/1(0-5) 9(8-0) 10(8-0) खेवट न0-555 खाता न0-606 मु0 न0- 69 किला न0- 15/2(7-12) 16(8-0) कुल किता 17 कुल रकबा 107 कनाल 3 मरला का माल रिकार्ड के अनुसार मुटेशन न0-8444 -8445 बैय मन्जूर शुदा की रूह से मैसर्ज मुद्रा फाउन्डेशन लि0 मालिक काबिज है। उपरोक्त भूमि (रकबा) अरावली रेन्ज अथवा फोरेस्ट [illegible] की भूमी के अर्न्तगत नही आता इसलिए जाब से अनुरोध है कि उपरोक्त रकबे की एन·ओ· सी प्रदान की जावे।

अतः आप से निवेदन है कि उपरोक्त रकबे की हल्का पटवारी से उपरोक्त विषय पर कार्यवाही (एन ओ सी) दिलवाने की कृपा करे।

आपकी अति कृपा होगी।

प्रार्थी

मैसर्ज मुद्रा फाउन्डेशन लि0

मार्फत उमेश कुमार

ता0- 19-10-2011

पटवारी हल्का रिपोर्ट करें

N Teh

19/10/11

P.T.O

श्रीमान जी, तसदीक की जाती है कि अराजी ग्राम धारूहेड़ा मुस्तील नं. 69 / 15/2 -16 (7-12) 18

69 / 23/2 - 24 - 25 (1-12) (8-0) (8-0) 68 / 21/1 (3-12) 72 / 3 - 4 - 5 - 6 - 7 - 15 (7-7) (7-19) (8-0) (7-19) (6-16) (7-8)

73 / 1 - 8/2/1 - 10 - 9 - 11/1 (8-0) (0-13) (8-0) (8-0) (0-5) किता 17 तादादी 107 कनाल 3 मरला

की रकबे मैसर्ज मुन्ना माई लैण्ड फि. [illegible] जमाबन्दी साल 2008-09 कोटला मुबारिकपुर नई दिल्ली मालिक व काबिज है। उपरोक्त रकबा [illegible] फोरेस्ट विभाग के अन्तर्गत नहीं आती है कि [illegible] है

Kush
19-10-2…

Krishan Kumar Patwari
Circle Dharuhera.
Teh & Distt Rewari

Attested as per report of Patwari Halqa

नायब तहसीलदार
धारूहेड़ा 19/10/11

4/8

DIRECTORATE OF TOWN AND COUNTRY PLANNING, HARYANA, CHANDIGARH

Memo No.DGTCP/ACCTTS/AO (A.K.D)/2012/633 Dated –29.01.2013

To

The STP(M)
o/o Director General,Town & Country Planning Deptt.,
Haryana, Chandingarh.

Subject -: Audit Report regarding compliance of Rule 24,26,27 & 28 of Haryana Development and Regulation of Urban Area Rules ,1976 against Licence no. 40 of 2007, G.H. Colony on land measuring 13.394 acres in Sector-1, Daruhera.

Please refers to the cited above.

Under Section 6 of Haryana Development and Regulation of Urban Area Act ,1975, Audit of Accounts regarding the compliance of Rule 24,26,27 & 28 of Haryana Development and Regulation of Urban Area Rules ,1976 Audit Report regarding compliance of Rule 24,26,27 & 28 of Haryana Development and Regulation of Urban Area Rules ,1976 against Licence no. 40 of 2007, G.H. Colony on land measuring 13.394 acres in Sector-1, Daruhera, has been conducted by the Audit party of Headquarter comprising of Accounts Officer along with Section Officer under the supervision of Chief Accounts Officer. On the basis of relevant record/ undertakings, submitted by the concerned colonizer, audit report is hereby submitted for information and further necessary action.

Encls: Audit Report and relevant documents.

Chief Accounts Officer,
o/o Director General, Town and Country Planning
Haryana, Chandigarh.

Endst. No. DGTCP/ACCTTS/AO(AKD)/2012/633 Dated –29.01.2013

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

1. The DTP (SS) concerned.
2. Mudra Finance Limited, with the direction to ensure future compliance also in accordance with the provisions of Act and Rules as suggested at the time of audit.

Chief Accounts Officer,
o/o Director General, Town and Country Planning
Haryana, Chandigarh.

1.	Name of the Colonizer Licence no. & Date	Mudra Finance Limited Ltd. Licence no: 40 of 2007.
2.	Type of Colony Area (in acres) Name of Urban area In which it is situated:	GH Colony 13.394 Acres. Sector-1, Dharuhera
3.	Date and year in which audit has been conduced	2011-12
4.	Authorization under section 6 for conducting the audit	Yes
5.	Whether the colonizer has obtained approval/NOC from the competent authority in pursuance of MOEF notification dated 14.9.2006	Not relates to Account wing.
6.	Whether the colonizer has conveyed ultimate power load required of the project to the power utility within two months from the date of grant of license	Not relates to Account wing .
7.	Whether the colonizer has transferred portion of sector/master plans road forming part of licensed area free of cost to the Govt. or not	Not relates to Account wing.
8.	Whether the advertisement for sale of plot/flat/floor area in residential plotted/group housing and commercial colonies have been given after the approval of layout plans/building plans	Detail report attached.
9.	Whether the complete scheme of EWS plots/flats in licensed plotted/group housing colony have been plotted for allotment in one go within four months of grant of licence or sanctioned of building plans	Not relates to Account wing
10.	Whether the colonizer has complied he provision of apartment ownership act in respect of group housing colony and commercial colony	Not relates to Account wing

		development/construction works may be submitted to the department after close of each financial year within the stipulated period of three months.
3	Rule-27 Intimation of account no. of colonizer:- The colonizer shall intimate the account number and full particulars of the scheduled bank wherein he deposits thirty percent of the amount realized by him from the plot/space holders for meeting the cost of internal development works in the colony.	Colonizer has intimated through undertaking that separate account bearing no. 912020023179204 for internal development works has been opened on dated 30.04.2012 with "Axis Bank".
4	Rule-28 Intimation about deposit of amount. The colonizer shall intimate in form AC on the fifth day of each month the amount realized by him from each of plot/space holders and the amount deposited by him in the scheduled bank during the preceding month.	The Colonizer has intimated through undertaking hat he has opened separate IDW account and now 30% of the total received is being transferred in separately opened new account for IDW. The colonizer was directed during the course of audit to intimate in form AC on the 5th day of each month the amount realized by him from each of the unit holders and the amount deposited by him in the scheduled bank during the preceding month.

As per accounts statement details of outstanding amount against Licence no. 40 of 2007 is as under:-

(Amount ₹ in Lacs)
(outstanding as on 29.01.2013)

Head of account	Principal	Interest	Total	Remarks
EDC	Fully Paid			
IDC	Fully Paid			

Status of Bank Guarantee

Bank	B.G. No.	Amount	Validity of B.G.	Nature of B.G.	Remarks
S.B	1/2007	100.475	02.01.2014	IDW	
S.B.	1/2012	128.3655	09.07.2014	IDW	

Note: Above said status report is subject to audit and reconcillation of accounts.

A. K. Dhingra
A.O.

		stipulated period of three months.
3	Rule-27 Intimation of account no. of colonizer:- The colonizer shall intimate the account number and full particulars of the scheduled bank wherein he deposits thirty percent of the amount realized by him from the plot/space holders for meeting the cost of internal development works in the colony.	Colonizer has intimated through undertaking that separate account bearing no. 912020023179204 for internal development works has been opened on dated 30.04.2012 with "Axis Bank".
4	Rule-28 Intimation about deposit of amount. The colonizer shall intimate in form AC on the fifth day of each month the amount realized by him from each of plot/space holders and the amount deposited by him in the scheduled bank during the preceding month.	The Colonizer has intimated through undertaking hat he has opened separate IDW account and now 30% of the total received is being transferred in separately opened new account for IDW. The colonizer was directed during the course of audit to intimate in form AC on the 5th day of each month the amount realized by him from each of the unit holders and the amount deposited by him in the scheduled bank during the preceding month.

As per accounts statement details of outstanding amount against Licence no. 40 of 2007 is as under:-

(Amount ₹ in Lacs)
(outstanding as on 29.01.2013)

Head of account	Principal	Interest	Total	Remarks
EDC	Fully Paid			
IDC	Fully Paid			

Status of Bank Guarantee

Bank	B.G. No.	Amount	Validity of B.G.	Nature of B.G.	Remarks
S.B	1/2007	100.475	02.01.2014	IDW	
S.B.	1/2012	128.3655	09.07.2014	IDW	

Note: Above said status report is subject to audit and reconciliation of accounts.

A. K. Dhingra
A.O.

AUDIT REPORT

It is submitted that the audit regarding compliance of Rule 24, 26, 27 & 28 of Haryana Development and Regulation of Urban Area Rules, 1976 against against Licence no. 40 of 2007, G H. Colony on land measuring 13.394 acres in Sector-1, Daruhera, has been conducted by the audit party comprising of Accounts Officer and Section Officer under the supervision of Chief Accounts Officer. The report is based on the documents provided by the colonizer for above said license is here under -

Sr. No	Requirements under rule 24,26,27 & 28 of the Haryana Development and Regulation of Urban Area Rules, 1976	Report regarding compliance made by the colonizer.
1	Rule-24 On obtaining a license to set up a colony, the colonizer shall furnish to the Director an authenticated copy of the advertisement made by him for the sale of plots/spaces in the colony and of the terms of agreement entered into between him and each of the plot/space holders.	In compliance to rule 24 the colonizer has submitted the copy of advertisement made in "Hindustan" dated 28.09.2008. On sale of plots in the colony the agreements were made between the colonizer and space holders. Five no. copies of the agreements executed between the colonizer with their buyers were test checked.
2	Rule-26 (1) Maintenance and submission of accounts The colonizer shall- i) Issue regular receipts to the plot/space holders in respect of the money received by him and maintain counterfoils of the receipts so issued; ii) Maintain separate ledger account of each plot/space holder; iii) Maintain a register containing authenticated copies of each of the agreements entered into between him and each of the plot/space holders; and iv) Maintain accounts books showing details of expenses incurred by him on various development works in the colony.	26(1) As per test checking, it revealed that i) The colonizer has issued regular receipts to the plot holders in respect of money received by him and maintained the counterfoils of the receipts also. ii) Maintained separate ledger account of each plot holders iii) Maintained computerized record of the agreement entered into between colonizer and each of the plot holder. iv) The colonizer has maintained the head wise details of expenditure incurred by him on various development works in the colony.
	Rule-26 (2) The colonizer shall within a period of three months after the close of every financial year, submit to the Director through registered post with acknowledgement due a statement of accounts indicating the amount realized from each plot/space holders, the expenditure incurred on internal and external development works separately of the colony with details thereof together with the amount due from each plot/space holder indicating their postal address. This statement should be got audited, certified and signed by a chartered accountant.	Colonizer has now submitted the statement of receipt and expenditure duly audited and signed by chartered accountant. Accordingly, detail of receipt and expenditure is as under :- Rupees(in Crore) Received Upto 30.11.2012 — 92.74 Expenditure on development/Construction upto 30.11.2012 — 86.96 The colonizer was directed that in future in compliance of Rule 26(2), required statement showing the head-wise detail of receipt and expenditure on

AFFIDAVIT

हरियाणा HARYANA 37AA 059178

I, Suresh Pratap Singh for and behalf of the company do hereby solemnly affirm, declare and undertake as under:

I, Suresh Pratap Singh, (Authorised Signatory) of M/s Mudra Finance Ltd. having its registered office at G-12 A, First Floor, Hauz Khas, New Delhi-110016 empowered and competent to swear this undertaking as given below:

1. That we are owners of the proposed Expansion of Group Housing Colony (13.394 acres) in the Village-Dharuhera, District-Rewari, Haryana
2. We will use low sulphur diesel HSD (0.25%) for our generator sets.
3. That we implement the Electrical hazards safety Plan.
4. We will take care of Welfare and safety of labours.
5. Stack heights of DG sets will be as per CPCB guidelines.
6. ECBC norms for thermal insulation will be followed.
7. That we hereby undertake that we will comply with all the provisions of E waste (Management & Handling Rules, 2011)
8. That we will use STP treated water for our Group Housing Colony (13.394 acres) in the Village-Dharuhera, District-Rewari, Haryana

DEPONENT

VERIFICATION:

Verified at Gurgaon on this 26th March'2015 that the contents of Para No. 1 to Para No. 8 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

By Speed Post

No. 21-1021/2007-IA.III
Government of India
Ministry of Environment and Forests
(I. A. Division)

Paryavaran Bhawan,
CGO Complex, Lodhi Road
New Delhi 110003

Dated: May 22, 2008

To

M/s. Mudra Finance Limited
Vipul Tech Square, Golf Course Road,
Sector-43, Gurgaon-122 009
Haryana

Subject: **Environmental Clearance for construction of Group Housing residential colony Vipul garden at Dharnhera (NH-8) district Rewari, Haryana.**

Dear Sirs,

I am directed to refer to your application seeking prior environmental clearance for the above project under the EIA Notification 2006. The above proposal has been appraised as per prescribed procedure on the basis of the documents enclosed with the application viz. Form1, Form 1A, Conceptual Plan and the additional clarifications furnished in response to the observations of the Expert Appraisal Committee (EAC) constituted by the competent authority in its 28th meeting held on March 28-29, 2008.

2. The project proponent is proposing to construct a Group Housing residential colony Vipul garden at Dharnhera (NH-8) district Rewari, Haryana at a cost of Rs. 130 crore. The project will comprise construction of 4 tower A(G+14), 6 tower B(G+14), 1 tower C(G+14), 4 tower for EWS units(G+7), shop(G+1) and school. Total plot area is 54,203.509 sq.m. The total built up area as indicated is 80,146.752 sq.m. Total water requirement will be 628 KLD including recycled water and 432 KLD of wastewater will be generated. The STP will be installed for the treatment of sewage generated from the colony (capacity-475 KLD). The treated waste water will be used for horticulture and flushing purpose. The solid waste generated (1.8 Ton/day) will be segregated into organic and inorganic waste. The recyclable solid waste will be handed over to authorized vendors for recovery of recyclable material and organic biodegradable waste will be converted in to manure by composting. The parking space proposed for parking of cars is 926 cars.

3. The EAC after due consideration of the relevant documents submitted by the project proponent and additional clarifications furnished in response to its observations have recommended the grant of environmental clearance for the project mentioned above subject to compliance with the EMP and other stipulated conditions. Accordingly, the Ministry hereby accords necessary environmental clearance for the project under category 8 (a) of EIA

Notification 2006 subject to the strict compliance with the specific and general conditions mentioned below:

PART A- SPECIFIC CONDITIONS

I. Construction Phase

i. Vehicles hired for construction activities should be operated only during non-peak hours.
ii. All the top soil excavated during construction activities should be stored for use in horticulture/landscape developments within the project site.
iii. Ready mixed concrete shall be used in building construction.
iv. Water demand during construction shall be reduced by use of pre mixed concrete, curing agents and other best practices.
v. Permission to draw and use ground water for construction work shall be obtained from competent authority prior to construction/operation of the project.
vi. Fixtures for showers, toilet, flushing and drinking should be of low flow either by use of aerators or pressure reducing devices or sensor based control.
vii. Use of glass may be reduced upto 40% to reduce the electricity consumption and load on air conditioning. If necessary, use high quality double glass with special reflective coating in windows.
viii. Roof should meet the prescriptive requirement as per energy conservation building code by using appropriate thermal insulation material to fulfill requirement.
ix. Opaque wall should meet prescriptive requirement as per energy conservation building code which is proposed to be mandatory for all air conditioned spaces while it is aspirational for non air conditioned spaces by use of appropriate thermal insulation to fulfill requirement.
x. Storm water control and its reuse should be as per Central Ground Water Board and BIS standards for various applications.
xi. All required sanitary and hygienic measures including portable toilets/septic tank etc, for labour should be in place before starting construction activities and to be maintained throughout the construction phase.
xii. Soil and ground water samples will be tested to ascertain that there is no threat to groundwater quality by leaching of heavy metals and other toxic contaminants.
xiii. A First Aid Room will be provided at the project site both during construction and operation of the project.
xiv. Adequate drinking water facility should be provided for construction workers at the site. The safe disposal of wastewater and solid wastes generated during the construction phase should be ensured.
xv. Disposal of muck including excavated material during construction phase should not create any adverse effects on the neighboring communities and be disposed off taking the necessary precautions for general safety and health aspects of people.

xvi. Diesel power generating sets used during construction phase should be of "enclosed type" to prevent noise and should conform to rules made under Environment (Protection) Act 1986, prescribed for air and noise emission standards.

xvii. Ambient noise levels should conform to standards both during day and night when measured at boundary wall of the premises. Incremental pollution loads on the ambient air and noise quality should be closely monitored during construction phase.

xviii. The construction agencies shall use flyash based material/ products as per the provisions of fly ash notification of 14.9.1999 and as amended on 27.8.2003.

xix. Vehicles hired for bringing construction material at site should be in good condition and should have valid "pollution under check"(PUC) certificate and to conform to applicable air and noise emission standards and should be operated only during non-peaking hours.

xx. Construction spoils including bituminous material and other hazardous materials must not be allowed to contaminate water courses and the dump sites for such material must be secured so that they should not leach into the ground water.

xxi. Any hazardous waste generated during construction phase should be disposed of as per applicable Rules & norms with necessary approvals of the State Pollution Control Board.

xxii. Under the provisions of the Environment (Protection) Act 1986, legal action shall be initiated against the project proponent if it was found that construction of the project had started without obtaining environmental clearance.

xxiii. The diesel required for operating DG Set shall be stored in underground tanks and if required, clearance from the Chief Controller of Explosives shall be taken.

xxiv. The approval of competent authority shall be obtained for structural safety of the buildings due to earthquake, adequacy of fire fighting equipments etc. as per National Building Code including protection measures from lightening etc. If any forest land is involved in the proposed site, clearance under The Forest Conservation Act shall be taken from the competent Authority.

xxv. Regular supervision of the above and other measures for monitoring should be in place all through the construction phase so as to avoid disturbance to the surroundings.

II. Operation Phase

The environmental clearance recommended to the project is subject to the specific conditions as follows:

i. Diesel power generating sets proposed as source of back up power for lifts, common area illumination and for domestic use should be of "enclosed type" and conform to rules made under The Environment (Protection) Act 1986. The location of DG Sets may be decided in consultation with State Pollution Control Board.

ii. Ambient noise levels should be controlled to ensure that it does not exceed the prescribed standards both within and at the boundary of the proposed complex .

iii. Weep holes in the compound walls shall be provided to ensure natural drainage of rainwater in the catchment area during the monsoon period.

iv. The STP shall be installed for the treatment of sewage generated to the prescribed standards including odour and treated effluent will be re-cycled to the maximum extent possible including use for maturation ponds. In case treated effluent is to be discharged separately during monsoon period consent of State Pollution Control Board shall be taken.

v. Separation of gray and black water should be done by the use of duel plumbing line. Treatment of 100% gray water by decentralized treatment should be done.

vi. For disinfection of waste water ultra violet radiation shall be used in place of chlorination.

vii. Rainwater harvesting and ground water recharging shall be practiced. Oil & Grease trap shall be provided to remove oil and grease from the surface run off and suspended matter shall be removed in a settling tank before its utilization for rainwater harvesting.

viii. The solid waste generated should be properly collected & segregated. Wet garbage should be sent for composting and dry/inert solid waste should be disposed off to approved sites for land filling after recovering recyclable material.

ix. The open spaces inside the plot should be preferably landscaped and covered with vegetation of indigenous variety. Green belt of adequate width and density will be provided all around the periphery of the plot suitably with local species to reduce noise and dust level.

x. The ground water levels and its quality should be monitored regularly in consultation with Central Ground Water Authority.

xi. A Report on the energy conservation measures should be prepared incorporating details about building materials & technology, R & U Factors etc and submitted to the Ministry in three months time.

xii. The values of R & U for the building envelope should meet the requirements of the hot & humid climatic location. Details of the building envelope should be worked out and furnished in three months time.

xiii. Energy conservation measures (as per ECBC norms) like installation of CFLs/FLs for lighting the areas outside the building should be integral part of the project design and should be in place before project commissioning. Used CFLs & FLs should be properly collected and disposed of/sent for re-cycling as per the prevailing rules/guidelines of the regulatory authority to avoide Mercury contamination. Use of solar panels may be done to the extent possible.

xiv. The buildings should have adequate distance between them to allow movement of fresh air and passage of light to the residential premises.

xv. Adequate measures should be taken to prevent odour problem from solid waste processing plant as also from the STP.

PART – B. GENERAL CONDITIONS

i) The environmental safeguards contained in the documents should be implemented in letter and spirit.

ii) Provision should be made for the supply of kerosene or cooking gas and pressure cooker to the laborers during construction phase.

iii) 6 monthly monitoring reports should be submitted to the Ministry and its Regional Office.

4. Officials from the Regional Office of MOEF, Chandigarh who would be monitoring the implementation of environmental safeguards should be given full cooperation, facilities and documents / data by the project proponents during their inspection. A complete set of all the documents submitted to MoEF should be forwarded to the CCF, Regional office of MOEF, Chandigarh.

5. In the case of any change(s) in the scope of the project, the project would require a fresh appraisal by this Ministry.

6. The Ministry reserves the right to modify/add additional environmental safeguards subsequently, if found necessary. Environment Clearance granted will be revoked if it is found that false information has been given for approval of the project.

7. Necessary permission shall be obtained from the State Fire Department for providing fire safety measures before allotment of premises for residential purpose in the township.

8. These stipulations would be enforced among others under the provisions of the Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and control of Pollution) act 1981, the Environment (Protection) Act, 1986 and the Public Liability (Insurance) Act, 1991.

9. The project proponent shall enter in to MOU with all buyers of the property, if any, to ensure operation and maintenance of the STP and other assets.

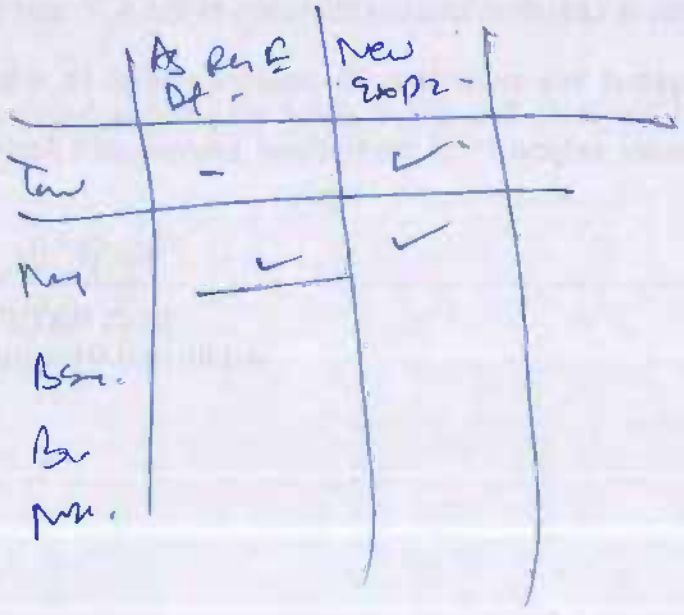
10. Any appeal against this environmental clearance shall lie with the National Environment Appellate Authority, if preferred, within a period of 30 days as prescribed under section 11 of the National Environment Appellate Act, 1997.

(K.C. RATHORE)
Additional Director (IA)

Copy to: -

1. The Secretary, Department of Environment, Government of Haryana, Secretariat Building, Panchkula, Haryana.
2. The Chairman, State Environment Impact Assessment Authority, Dept. of Environment, Secretariat building, Punchkula, Haryana.
3. The Member Secretary, Haryana Pollution Control Board, Panchkula, Haryana.
4. The CCF, Regional Office, Ministry of Environment & Forests, Chandigarh.
5. IA - Division, MOEF, Paryavaran Bhawan, CGO Complex, New Delhi.
6. Guard file

(K.C. RATHORE)
Additional Director (IA)



Regd. No.: 359
Date: 5/1/15

NOTARIAL

National Accreditation Board for Education & Training

Quality Council of India

CERTIFICATE OF ACCREDITATION

M/s Kadam Environmental Consultants

871/B/3, GIDC Makarpura, Vadodra, Gujarat – 390010

is hereby accorded accreditation under the QCI-NABET Scheme for Accreditation of EIA Consultant Organizations (Rev. 09, August 2011) for the following scope:

Sl. No.	Name of the Sector	Cat.
1.	Mining of Minerals	A
2.	Offshore and onshore oil and gas exploration, development & production	A
3.	River valley, hydel, Drainage and Irrigation projects	A
4.	Thermal Power Plants	A
5.	Metallurgical industries (ferrous & non ferrous) - both primary & secondary	B
6.	Petroleum refining industry	A
7.	Chlor-alkali industry	A
8.	Chemical Fertilizers	A
9.	Pesticides industry and pesticide specific intermediates (excluding formulations)	A
10.	Petro-chemical complexes (industries based on processing of petroleum fractions & natural gas and/or reforming to aromatics)	A
11.	Textile – cotton and manmade fibers	A
12.	Petrochemical based processing (processes other than cracking & reformation and not covered under the complexes)	A
13.	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic rubbers; basic organic chemicals, other synthetic organic chemicals and chemical intermediates)	A
14.	Integrated paint industry	B
15.	Oil & gas transportation pipeline (crude and refinery/ petrochemical products), passing through national parks/ sanctuaries/ coral reefs /ecologically sensitive Areas including LNG terminal	A
16.	Isolated storage & handling of hazardous chemicals (As per threshold planning quantity indicated in column 3 of Schedule 2 & 3 of MSIHC Rules 1989 amended 2000)	B
17.	All ship breaking yards including ship breaking units	A
18.	Industrial estates/ parks/ complexes/ Areas, export processing zones(EPZs), Special economic zones (SEZs), Biotech parks, Leather complexes	A
19.	Common hazardous waste treatment, storage and disposal facilities (TSDFs)	A
20.	Jetties including dredging only	A
21.	Common effluent treatment plants (CETPs)	B
22.	Common municipal solid waste management facility (CMSWMF)	B
23.	Building and large construction projects including shopping malls, multiplexes, commercial complexes, housing estates, hospitals, institutions	B
24.	Townships and Area Development projects	B

Name of approved EIA Coordinators & Functional Area Experts are given in minutes of AC Meeting dated Oct 04, 2013; Jan 10, Mar 28, Oct 10 and Nov 26, 2014 posted on QCI website

Accreditation to the above Sectors is subject to the EIA reports being prepared by the experts (EIA Coordinators & Functional Area Experts) mentioned in the above minutes and compliance to the Terms and Conditions of Accreditation.

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C.E.O.

Accredited EIA Consultant Organization
NABET
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Note

- *Subject to continual compliance to NABET Scheme including Surveillance Assessment*
- *Updated status of accreditation available at www.qcin.org every 5th of the month*

M.A. SAIYED
NOTARY 5/1/2015

R. A. Wani
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Phone: 3259193

Annexure 24

Disaster Management Plan

A "Disaster" is an extremely rare major emergency / accident having high potential which can cause damage to human life / property arising suddenly either due to natural causes or due to human activities.

It is necessary to foresee the possible hazards and be in a state of readiness to prevent / minimize the adverse effects thereof.

A suitable response plan will be prepared & made ready for the project to react on various situations and for implementation of relevant mitigation measures.

Planning During Conceptual Stage

Proper planning at the conceptual stage of a corridor facility helps in enhancing the safety of the property and human beings. These eventually help to minimize loss of life and property, which are the direct consequences of accidents. In order to achieve the above, the following needs will be taken as given below

- Risks associated with the power line, transportation etc
- Safety measures
- Layout of the facility
- Emergency preparedness, and
- Compliance with the regulatory requirements

Objectives of the Disaster Management Plan

The overall objectives of the Disaster Management Plan (DMP) are summarized as follows:

- To contain and control emergency incidents
- To prevent loss of life and minimize the risk of bodily injury to employees, residential and neighboring population and visitors
- To minimize damage to property
- To minimize impact on environment
- To provide maximum possible safety for the emergency response personnel

To dovetail properly to a similar plan of the local government for an offsite emergency arising out of an on-site emergency.

Emergency Scenarios

Various scenarios which are anticipated to cause major emergencies are fire, oil spill, natural calamities like cyclone, earthquake etc. All these scenarios are as following

A. Fire

Fire is also a serious hazard and is normally regarded as having a disaster potential less than natural hazard that can be controlled at the incipient stage.

B. Cyclone

All the construction work is designed to withstand wind speed. The strategic actions during a cyclone can be activated by receiving advance information from the local meteorological department as well as from Disaster / Crisis management Centre of Govt. of Haryana. While establishing strategic actions that need to be taken during such scenarios, factors such as poor communication, loss of utilities, disrupted logistics and life-threatening rescue facilities will be considered.

C. Earthquake

An earthquake poses a major threat to the property, life and environment. Some of the effects of an earthquake are ground shaking, ground lateral displacement, ground uplift, ground settlement, soil liquefaction and fires. Though the earthquake is not a regular phenomenon in this region, the possibility of its occurrence cannot be ruled out especially since occasional shocks are perceived sometimes. Project area is categorized in the seismic Zone IV. However, the structural Design shall be as per Zone IV so as to safeguard the structures from the risk of unforeseen natural calamity.

D. Material / Transport Emergency

During transportation of the material, emergencies like Fire, Leakage or Spillage are possible. It may be outside the project premises, at nearby or far locations. Necessary emergency actions will be initiated from internal or external resources as per the nature of the emergency.

Categories of Emergencies

The emergency situations have been classified in three categories depending upon their magnitude and consequences.

Level 1 – section / Area wise

The emergency situation arising in any section of a particular area which is minor in nature & can be controlled within the affected section itself, with the help of in-house resources available at any given point of time. The emergency control actions are limited to level 1 only.

Such an emergency does not have the potential to cause serious injury or damage to property / environment and domino effect to other sections of the affected area or nearby areas. These incidents are analyzed and proper actions remedial measures are taken so that it does not escalate into a major accident.

Level 2 - Affecting more than one area within the complex

The emergency situation arising in one or more areas which has the potential to cause serious injury or damage to property / environment within the affected area or to the nearby areas. This level of emergency situation will not affect surrounding community beyond our premises.

Such emergency situation always warrants to mobilize the necessary resources available in-house and/or out source to mitigate the emergency.

Level 3 – Affecting neighboring area

The emergency situation as described in level 2, which by virtue of its consequences will spread and affect the nearby community outside the project.

Measures taken during Operation Phase:

- Shift-wise and trained Operation & Maintenance staff (formal training w.r.t. First aid fire fighting and other emergency services) will be provided.
- Periodic Mock drills along with refresher courses carried out to increase awareness
- First aid kit will be provided along with Emergency medicines

Training:

- Training pamphlet will be provides to every occupant
- Mock drills and training on safety aspects will be provided to all the staff

General Measures:

- The fire water tank will be always full loaded & there will be fire engine & diesel engine, in case of power backup
- Safe assembly points
- There will be availability of UPS (Uninterruptible Power Supply), emergency lighting and emergency announcement system, in case of emergency
- Fire/emergency exit boards will be displayed at suitable locations
- Proper signage
- Emergency phone numbers will be displayed

EMERGENCY EVACUATION PLAN

- Once an evacuation has been deemed necessary, the Emergency Notification System (Siren) shall be used to order an evacuation. Otherwise as a fool-proof method, in case of any fire alarm which leads to activation of hooter / sirens continuously for 1 minute & more, all employees / contractors / visitors must evacuate the building.
- Employees will exit the building through the closest Emergency exit door alternate exit routes should be used if their primary exit route is blocked. After leaving the building, employees will proceed directly to their designated assembly area.
- Concurrently, department supervisors will validate that all necessary equipment is shut off as required, and if required shut off main MCB after the permission received by Incident Controller. Many employees by the nature of their work move about the plant from location to location. These employees will leave with the department that they are in at the time of the evacuation and then report to their assigned assembly point after hearing emergency siren.
- Pregnant women and physically handicapped and elder people should be given priority. Employees should be asked not to run, but to walk brisk and stay calm.
- Once assembled at Safe assembly point, the Evacuation Leaders will determine if all employees and or visitors have been accounted for and will report this information to the Incident Controller.
- All the Functional Heads shall ensure that proper head counting of their employees is matching / available in the Assembly Area. In case of any discrepancy, they will immediately report this to concerned Evacuation Leaders.
- Employees should take all important belongings (keys, purse, documents etc), this is important in case the buildings will not be reopened for an extended period of time.
- Employees may not return into the building until the Incident Controller has issued an "ALL CLEAR" indication, Siren that it is safe to re-enter.

- Employees should take all important belongings (keys, purse, documents etc), this is important in case the buildings will not be reopened for an extended period of time. Employees may not return into the building until the Incident Controller has issued an "ALL CLEAR" indication, Siren that it is safe to re-enter.
- Centrally located throughout the building, graphical plans detailing department specific egress routes and building exit points shall also be posted.

EMERGENCY RESPONSE PLAN

Introduction

Accidents can occur in any industry in spite of the efforts to prevent them. Quite often they give rise to suffering and damage, the extent of which is, in part, determined by the potential for the loss surrounding the event. Energy Centre industries have a hazard potential that will result in loss and there have been cases where the loss, measured in both human and monetary terms have been severe. It is equally true to say that there have been cases where, because of effective action taken at the time, the full potential loss has been largely avoided. Effective actions in these cases, has been possible due to the existence of a 'PRE – PLANNED AND PRACTISED' procedure for handling emergencies, utilizing the combined resources of the industrial concern and the outside services.

DMP for the industrial units is necessarily a combination of various actions which are to be taken in a very short time but in a present sequence to deal effectively and efficiently with any disaster, emergency on major accidents with an aim to keep the loss of men, material plant and machinery etc. to the minimum.

Although a great deal of efforts and money is spent to reduce the scale and probability of accidents there always remains a finite but small possibility that disaster may occur.

The risk of accidents has considerable potential for human injury, physical damage and financial consequences but if effective action is taken in appropriate time, then full potential loss can be avoided or minimized.

Effective action has been possible due to the existence of pre planned and practiced procedures or dealing emergency both.

- Plant and site level using internal resources
- On a large scale utilizing the combined resources of industry and other side services.

Emergency is a general term implying hazardous situation both inside and outside the factory premises. In order to comply with the provision of the Factories Act and Environment Protection Act and to ensure the safety of the workers as well as safety of the general public living in the vicinity of the factory, the risk assessment and emergency planning has been prepared. The emergency planning will be great help in making the workers safety conscious and make them confident to handle any type of emergency situation.

Definition

An emergency which may cause serious injuries, loss of life, extensive damage to property or environment or serious disruption inside the plant, or the events that are commonly having serious implications like major fire hazards, causing serious burns to personnel resulting in collapse or structures or release or toxic substances in the environment.

Scope

An important element of mitigation is an emergency planning, i.e. identifying accident possibility, assessing the consequences of such accidents and deciding on the emergency procedures, both on site and off site that would need to be implemented in the event of an emergency.

Emergency planning is just one aspect of safety and cannot be considered in isolation. DUL with a capacity of 20 MW Energy Centre with fully endorse this fact and hence before starting to prepare the plan, works management will ensure that the necessary standards, appropriate to safety legislation, are in place.

Objective

Emergency planning for the full range of possible incidents is just one aspect of planning for safety. It cannot be considered in isolation. The main objectives of the emergency planning are as follows:

- To assess what dangers could arise to people on and offsite as a result of these foreseeable emergencies and what the effects could be on the environment.
- To contain and control incidents
- To assess the risk involved, and to mitigate the same by preplanned remedial and rescue measures using, when necessary, the combined resources of the organization concerned and the public emergency services.
- To safe guard employees, any one nearby, who might be affected and to minimize damage to property or the environment.
- The training of the individual personnel with duties under the plans will be familiarizing on site personnel with their roles, their equipment and the details of the plans. Exercises should be ensure that the onsite emergency procedures for each process plant, storage facility etc are tested regularly and these exercises should be arranged to test each part of the emergency plan on each plant, stage by stage, starting with first immediate action.
- The on site emergency plan should be based on the specific needs of each particular site for dealing with those emergencies which it is fore seen may arise.
- For an emergency plan to be successful, it should be tested, when first devised and thereafter to be rehearsed at suitable intervals.

EMERGENCY RESPONSE TEAM AND THEIR RESPONSIBILITIES

Site HSE coordinator

- Update the emergency plan annually or more frequently as needed to reflect changes to site operations and or other relevant factors.
- Ensure that all First Aid Team members and Evacuation Leaders are trained as to their roles in the emergency response plan.
- Plan, implement and review emergency evacuation and response drills at least annually.

Department Supervision

- Initiate appropriate response notification in the event of an emergency.
- Ensure that every employee is given general and site specific emergency response training as well as detailed evacuation plan instructions including assembly areas.
- Validate that all required machinery and or equipment is shut down in the event of an evacuation.

Incident Controller

- Ensure that all emergency responses are being managed in accordance with ERP.
- Notify and coordinate outside agencies and or emergency personnel for assistance as required
- Coordinate with the Site Response Teams such as First Aid Team, Evacuation Leaders, and Security Teams etc.

Alternate Incident Controller

- They shall act as Incident Controller in absence of Primary Incident Controller.
- Inform to Incident Controller about the Incident at the site.

EMERGENCY PLAN

General

Disaster Management Plan for an industrial unit is necessarily a combination of various actions which are to be taken in a very short time but in a present sequence to deal effectively and efficiently with any disaster, emergency or major accident with an aim to keep the loss of men, material, plant/machinery etc. to the minimum.

The main functions of the Disaster Management Cell are to prepare a detailed Disaster Management Plan, which includes:

- Identification of various types of expected disaster depending upon the type of the industrial unit.
- Identification of various groups, agencies, departments etc. necessary for dealing with a specific disaster effectively.
- Preparation – by intensive training of relevant teams/groups within the organization to deal with a specific disaster and keep them in readiness.
- Establishment of an early detection system for the disaster.
- Development of a reliable instant information / communication system.
- Organization and mobilization of all the concerned departments/ organizations / groups and agencies instantly when needed.

Emergency Planning for Disaster due to Fire

Probability of Explosion/ Fire hazards is there due to handling of Natural Gas. Due to natural gas usage jet/flash fire & BLEVE (Boiling Liquid Expanding Vapor Explosion) may take place within the plant for which disaster management plan is to be made to deal with any eventuality of fire. Stores, workshop, canteen and administration building will be included. There will be the use of potable Fire Extinguishers and tie-up with local near-by fire station.

2/8

सेवा में,

श्री मान नायब तहसीलदार साहब,

धारूहेडा ।

विषय :- दरखास्त बाबत एन·ओ·सी· प्रदान करने हेतु

श्री मान जी,

प्रार्थी की जमीन गांव धारूहेडा तहसील व जिला रेवाडी खेवट न0-411 खाता न0-441 मु0 न0-68 किला न0-21/1{3-12} मु0 नम्बर 69 किला नम्बर 23/2{1-12} 24{8-0} 25{8-0} मु0 न0- 72 किला न0-3{7-7} 4{7-19} 5{8-0} 6{7-19} 7{7-16} 15{7-8} मु0 न0- 73 किला नम्बर 1{8-0} 8/2/1{0-13} 11/1{0-5} 9{8-0} 10{8-0} खेवट न0-555 खाता न0-606 मु0 न0- 69 किला न0- 15/2{7-12} 16{8-0} कुल किता 17 कुल रकबा 107 कनाल 3 मरला का माल रिकार्ड के अनुसार मुटेशन न0-8444 -8445 बेमन्जूर शुदा की रूह से मैसर्ज मुद्रा फाइनेन्श लि0 मालिक काबिज है। उपरोक्त भूमि {रकबा} अरावली रेन्ज अथवा फोरेस्ट [illegible] की भूमी के अर्न्तगत नही आता इसलिए जाबसे अनुरोध है कि उपरोक्त रकबे की एन·ओ· सी प्रदान की जावे।

अत: आप से निवेदन है कि उपरोक्त रकबे की हल्का पटवारी से उपरोक्त विषय पर कार्यवाही {एन ओ सी} दिलवाने की कृपा करें।

आपकी अति कृपा होगी।

UmeshKumar
प्रार्थी
मैसर्ज मुद्रा फाइनेन्श लि0
मार्फत उमेश कुमार

ता0- 19-10-2011

पटवारी हल्का [illegible]

N Teh
19/10/11

P.T.O

श्रीमान जी, तहकीक की जाती है कि अराजी ग्राम धारूहेड़ा मुश्तमला नं. 69 15/2 -16 (2-12) (1-8)

69 23/2 -24 -25 (1-12) (8-0) (8-0) 68 21/1 (3-12) 72 3 -4 -5 -6 -7 -15 (7-7) (7-19) (8-0) (7-19) (6-16) (7-8)

73 1 -8/2/1 -10 -9 -11/1 (8-0) (0-13) (8-0) (8-0) (0-5) किता 17 तादादी 107 कनाल 3 मरला की रकबे मौजूदा मुताबिक [illegible] जमाबन्दी साल 2008-09 [illegible] मालिक व काबिज है। उपरोक्त कोटला मुबारिकपुर नहीं मिलती [illegible] नहीं आते है कि [illegible] फोरेस्ट विभाग के अन्तर्गत [illegible] है।

Attested as per report of Patwari Halqa

Kush
19-10-2[illegible]

Krishan Kumar Patwari
Circle Dharuhera.
Teh & Distt Rewari

[illegible]
नायब तहसीलदार
धारूहेड़ा 19/10/11

From

Director,
Haryana Fire Service, Haryana,
Panchkula.

To

M/ Mudra Finance Ltd.
Vipul Tech. Square, Golf course road,
Sector 43, Gurgaon.

Memo No. DFS/2014/ 11303
Dated: 08-5-14

Subject: - No objection Certificate from the Fire Safety Point of View for the Tower no. 1,7 & 8 in Group Housing Colony (Vipul Garden) measuring 13.394 acres in Sector 1, Dharuhera, Distt. Rewari being developed by M/s Mudra Finance Ltd.

Reference your letter dated MFL / VG / SPS / 13-14 /.606, dated 6th February,2014, on the subject cited above.

2- Your site for the fire NOC has been inspected by the Fire Station Officer, Fire Station, Rewari from fire safety Point of View. The means of escape and Fire Protection system were checked and found as per the N.B.C. 1983 part IV revised 2005 guidelines.

3- In view of the satisfactory fire protection system / arrangement mentioned as above, this office has No objection for occupation of Building from the Fire Safety point of view, with the following conditions:-

1. The owner/occupier shall keep duly trained Fire Staff in all three shifts.
2. The Fire Protection System tested during inspection shall be maintained properly & always should be in good working condition.
3. The Garbage generated in the building shall be carried to the designated Garbage dumping site by authority.
4. If any lapse is found in the fire protection system at the time of inspection or detected during outbreak of fire, action will be taken as per rules against you.
5. You are directed to apply for NOC in future before 2 month of expiry of your NOC with information enclosed Performe.
6. The open set back area is not checked at our end as it shall be checked by concerned building plan sanctioning authority/department.
7. The owner/occupier shall strictly follow the other applicable rules/ regulations/ byelaws laid down regarding fire safety system. If you fail to comply with any of the above terms & conditions you will be liable to be punished as per Fire Act 2009 specially chapter- III Section 31 Sub-Section 1 & 2of Fire Act 2009.
8. You have to perform quarterly Fire Drill in your building as per NBC with intimation to Fire Department and videography evidence to be kept as a record which shall be produced at the time of next Renewal; Residents/RWA should be participated in the drill.
9. If the Infringements of Byelaws remains un- noticed the Authority reserves the right to amend the NOC as and when any such Infringements comes to notice after giving an opportunity of being heard and the Authority shall stand Indemnified against any claim on this account.

The above NOC is valid for only one year from the date of issue of this letter Applying renewal of the same well in time shall be the responsibility of owner/occupier.

Fire Officer
for Director, Fire Service Haryana,
Panchkula.

Endst. No- DFS/2014/ Dated: 8.5.14

A copy if forwarded to the Fire Station Officer, Rewari for information and necessary action w.r.t his letter No. FSR-165, dated 03.04.2014.

Fire Officer
for Director, Fire Service Haryana,
Panchkula.

No Objection Certificate

M/s Mudra Finance Ltd. Vipul Tech Square, Golf course road Sector-43 Gurgaon (Haryana) has applied for granting No Objection Certificate for fire safety point of view for Group Housing Colony (Vipul Gardens) high rise building situated at Sector-1, Dharuhera Distt. Rewari as per National Building Code Part-IV 1983 Revised 2005. Approval for fire fighting scheme as per National Building Code Part-IV 1983 Revised 2005 has been granted to this company vide this office letter No. 9194/PLA dated 21.05.2013 with layout plan singed by Fire Station Officer, Rewari.

There is no objection for fire safety point of view for Group Housing Colony (Vipul Gardens) high rise building situated at Sector-1, Dharuhera Distt. Rewari as per National Building Code Part-IV 1983 Revised 2005 as per report of Fire Station Officer, Rewari vide letter No. FSR-557 dated 28.10.2013 (Copy enclosed) subject to condition that company will be bound to comply with all conditions imposed by Fire Station Officer, Rewari. In addition to this, all other terms and condition imposed by the Govt. from time to time will also be applicable. This No Objection Certificate is valid for one year up to 11.11.2014.

Encl.:- Copy of report Fire Station Officer, Rewari No. FSR-557 dated 28.10.2013.

District Magistrate REWARI

— sd —
Deputy Commissioner,
Rewari.

Endst. No. 10152-53 /PLA Dated 14/11/13

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

1. **M/s Mudra Finance Ltd. Vipul Tech Square, Golf course road Sector-43 Gurgaon (Haryana).**
2. Fire Station Officer, Rewari w.r.t. his letter No. FSR-557 dated 28.10.2013.

Deputy Commissioner,
Rewari.

Deputy Commissioner
REWARI

pla English

उपायुक्त आवासीय
रेवाड़ी।

सेवा में

उपायुक्त महोदय
रेवाड़ी।

कमांक FSR-557 दिनांक 28-10-2013

विषय :– **Grant of NOC of occupation from the Fire & safety point of view Tower No. 2,5 & 6 in Group Housing colony (Vipul Garden) measuring 13.394 acres in Sector -1, Dharuhera Distt. Rewari (Haryana).**

उपरोक्त विषय पर आपके कार्यालय के यादि कमांक 9991/पी.एल.ए दिनांक 17–10–2013 के संदर्भ में।

अनुरोध है कि मैसर्ज मुद्रा फाईनैन्स लि0, विपुल टैक स्कैयर, गोल्फ कोर्स रोड़, सैक्टर –43, गुड़गांव द्वारा ग्रुपहाउसिंग कालोनी (विपुल गार्डन), 13.394 एकड़ भूमि, सैक्टर –1, धारूहेड़ा जिला रेवाड़ी में हाई राईस बिल्डिंग (टॉवर टाईप) के निर्माण हेतू जिलाधीश महोदय के यादि कमांक 5832/पी.एल.ए दिनांक 19–7–2011 द्वारा फॉयर फाईटिंग स्कीम की स्वीकृति प्रदान की गई है। Sechmatic Drawing के अनुसार 11 Tower + 1 EWS Tower, Community Centre Block 1 –2 तथा बेसमेन्ट 1 व 2 एव, Shopping Shops इत्यादि भवनों का निर्माण किया जाना है। इस समय 13.394 एकड़ भूमि सैक्टर एक में टॉवर नं0 2, 5 तथा 6 का निर्माण पूर्ण किया जा चुका है। जिसका अग्नि सुरक्षा की दृष्टि से निरीक्षण किया गया है। विवरण निम्न प्रकार से है:–

1. ग्रुप हाउसिग कालोनी जो कि एन0एच 8 दिल्ली – जयपुर रोड़ पर सड़क की बाई तरफ सैक्टर –1, धारूहेड़ा में स्थित है।
2. ग्रुप हाउसिंग कालोनी में कुल 12 टॉवर हाई राईयस बिल्डिंग एवं कम्यूनिटी सैन्टर ब्लॉक 1 व 2 तथा शॉपिंग शॉपस इत्यादि भवनों का निर्माण किया जाना है। जिनमें टॉवर नं0 2,5 व 6 इस समय कम्पलीट है।
3. टॉवर नं0 2,5 व 6 जो रिहायशी हाई राईस बिल्डिंग है। जिसमें ग्राउंड फलोर + 14 फलोर बने है। जिसकी ग्रेड लेवल से ओवर ऑल हाईट 44.70 मीटर है।
4. टॉवर नं0 2,5 व 6 की प्रत्येक फलोर पर फायर फाईटिंग सिस्टम According to NBC-2005 के अनुसार लगाया गया है।
5. बेसमैन्ट नं0 2 में फायर वॉटर टैंक 2 Nos. Capacity of each fire water tank 104 KL है। बेसमैन्ट 2 में पम्प रूम बना है। जिसमें इलैक्ट्रिक फायर पम्प क्षमता 2280 LPM output, 1 Nos.
   Diesal Fire Pump Capacity 2280 LPM output 1 Nos.
   Jockey pump 180 LPM output 1 Nos लगे है। जो कि इस समय Runing Condition में है तथा सभी फायर पम्प ऑटो पर है। Over head Fire water Tank capacity 10 KL है।
6. टॉवर नं0 2,5 व 6 में प्रत्येक मंजिल पर FHC बनी है। जिसमें 1 Hose Reel, 1 landing wall,2 Delivery Hose pipe = 15 Mtr. each and 2 Fire extinguisher, MCP and Fire hooter लगे है।
7. फायर सिस्टम को चलवाया गया है। जो सही हालत में कार्य करता है।
8. High Rise Building टॉवर नं0 2,5 व 6 तक फायर गाड़ी जाने के लिए 6 मीटर चौड़ी पक्की सड़क बनी है। फायर बिग्रेड की गाडी से पानी लेने व देने के लिए Inlet तथा outlet लगे है।
9. Lightning Arrestor :–टॉवर नं0 2,5 व 6 की छत पर लगा है तथा अर्थिंग की समुचित व्यवस्था की गई।

अतः अनुरोध है कि मैसर्ज मुद्रा फाईनैन्स लि0, विपुल टैक स्कैयर, गोल्फ कोर्स रोड़, सैक्टर –43, गुड़गांव द्वारा ग्रुप हाउसिंग कालोनी (विपुल गार्डन), 13.394 एकड़ भूमि, सैक्टर –1, धारूहेड़ा जिला रेवाड़ी में हाईराईस बिल्डिंग (टॉवर नं0 2,5 व 6) में Fire Fighting as per site plan and as per National Building Code Part IV1983 Revised 2005 के अनुसार व्यवस्था की गई है तथा की गई व्यवस्था चालू हालत में है। अतः इस कार्यालय को टॉवर नं0 2,5 व 6 का अनापत्ति प्रमाण पत्र जारी करने में कोई आपत्ति नही है। यह अनापत्ति आगामी एक वर्ष के लिए जारी करने की सिफारिश की जाती है।

B Singh 28/10/13
दमकल केन्द्र अधिकारी
रेवाड़ी।

No Objection Certificate

M/s Mudra Finance Limited (Vipul Garden) sector-01 Dharuhera Tehsil & Distt. Rewari (Haryana) has applied for renewal No Objection Certificate for fire safety point of view for Group Housing Colony (Tower No. 3, 4 & Basement) as per National Building Code Part-IV 1983 Revised 2005. No Objection Certificate as per National Building Code Part-IV 1983 Revised 2005 has been granted to this company vide letter No. 8984-85/PLA dated 05.04.2013 valid for one year i.e. up to 03.04.2014.

There is no objection for fire safety point view for Group Housing Colony as per National Building Code Part-IV 1983 Revised 2005 as per report of Fire Station Officer, Rewari vide letter No. FSR-246 dated 20.05.2014 (Copy enclosed) subject to condition that company will be bound to comply with all conditions imposed by Fire Station Officer, Rewari. In addition to this, all other terms and condition imposed by the Govt. from time to time will also be applicable. This No Objection Certificate is renewed for one year up to 03.04.2015.

Encl.:- Copy of report Fire Station Officer, Rewari No. FSR-246 dated 20.05.2014.

Deputy Commissioner,
Rewari.

Endst. No. 396-97 /PLA Dated 30/05/14

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

1. **M/s Mudra Finance Limited (Vipul Garden) sector-01 Dharuhera Distt. Rewari (Haryana).**
2. Fire Station Officer, Rewari w.r.t. his letter No. FSR-246 dated 20.05.2014.

Deputy Commissioner,
Rewari

District Magistrate
REWARI

#LA

Deputy Commissioner Office Rewari
3498
Diary No.
Date 22/5/14

05
21/5/14

दमकल केन्द्र अधिकारी
रेवाड़ी।

सेवा में

उपायुक्त महोदय
रेवाड़ी।

यादि कमांक FSR-246 दिनांक 20-05-2014

विषय :– **Renewal of NOC For occupation for Fire Safety point of view for tower no. 3,4 and Basement in Group Housing colony (Vipul Garden) in Sector-1, Dharuhera Distt. Rewari.**

उपरोक्त विषय पर आपके कार्यालय के यादि कमांक 249/पी0एल0ए0 दिनांक 30–4–2014 के संदर्भ में।

विषयाधीन मामले में अनुरोध है कि M/s Mudra Finanace Ltd, Vipul tech square, Golf Course Sector-43, Distt. Gurgaon ने Tower no. 3,4 and Basement in Group Housing colony (Vipul Garden) in Sector-1, Dharuhera Distt. Rewari की फायर फाईटिंग सिस्टम की एन0ओ0सी0 आगामी एक वर्ष के लिए नवीनीकरण की जानी है। अग्नि सुरक्षा की दृष्टि से स्थल का निरीक्षण किया गया एवं सी0डी0 बनाई गई। विवरण निम्न प्रकार से है:–

1. ग्रुप हाउसिंग कालोनी जो कि एन0एच0 –8, दिल्ली – जयपुर रोड पर सडक की बायी तरफ सैक्टर –1, धारूहेडा में स्थित है।
2. इस स्थल तक दमकल वाहन आसानी से आ जा सकता है।
3. इस ग्रुप हाउसिंग कालोनी के बेसमैन्ट में अंडर ग्राउंड फायर वाटर टैन्क 208 के0एल0 तथा ओवर हैड फायर वाटर टैंक प्रत्येक टावर पर 10 के0एल0 क्षमता का बना है।
4. फायर पम्प रूप बेसमैन्ट में बना है। जिसमें एक इलैक्ट्रिक पम्प 2280 एल0पी0एम0, एक डीजल पम्प 2280 एल0पी0एम तथा एक जोकि पम्प 180 एल0पी0एम0 के लगे है। जो कि इस समय ऑटो मोड में है।
5. बेसमैन्ट में Sprinkler System, फायर हाईड्रैन्ट, होज रील तथा Fire Extinguisher, फायर अलार्म व Shienage इत्यादि पर्याप्त मात्रा में लगे है।
6. उपरोक्त टावर की प्रत्येक फलोर पर एक FHC बनी है। जिसमें एक Fire Hydrant, Two delivery Hose pipe, one short branch pipe, one hose reel, two fire extinguishgers Co2 & ABC Type इस समय Working Condition में है।
7. उपरोक्त टावर की प्रत्येक फलोर पर 2 Stair Case जिन पर पीली पट्टी लगी तथा MCP and Hooter working condition में है।
8. प्रत्येक टावर की प्रत्येक फलोर पर Shineage लगे है तथा Floor marking भी की गई है। जो कि अंधेरे में चमकते है।
9. प्रत्येक टावर के ग्राउंड फलोर के बाहर फायर हाईड्रैन्ट एवं होज बॉक्स लगे है तथा फायर व्हीकल से पानी देने के लिए Four Way लगे है।
10. प्रत्येक टावर के Terrece Floor पर सबसे पहले Fire Water Tank पानी से भरता है तथा अन्य वाटर टैंक over flow से भरते है। इसके अतिरिक्त प्रत्येक टावर की टेरेस पर Lightning Arrestor लगा है।
11. प्रत्येक टावर के फायर फाईटिंग सिस्टम को चलवाकर देखा गया जो इस समय वर्किंग कंडीशन में है।

अतः M/s Mudra Finanace Ltd, Vipul tech square, Golf Course Sector-43, Distt. Gurgaon ने Tower no. 3,4 and Basement in Group Housing colony (Vipul Garden) in Sector-1, Dharuhera Distt. Rewari में फायर फाईटिंग सिस्टम इस समय Working Condition में है। अतः उपरोक्त टावरों एवं बेसमैन्ट की एन0ओ0सी0 रिन्यूवल करने में इस कार्यालय को कोई आपत्ति नही है।

संलग्न :– एक सी.डी

BSingh 20/5/14
दमकल केन्द्र अधिकारी

Annexured - III (1)

BR-III
(See Rule 44)

From

The Director,
Town and Country Planning,
Haryana, Chandigarh.

To

M/s Mudra Finance Ltd.
Vipul Tech Square, Sector Road, Sector-43,
Gurgaon.

Memo No. 3401 Dated: - 12-2-08

Subject:- Approval of building plans of Group Housing Scheme measuring 13.394 acres (Licence No. 40 of 2007 dated 25.1.2007) in Sector-1 Dharuhera being developed by M/s Mudra Finance Ltd.

Reference your application dated 1.8.2007 and subsequent letter dated 24.11.2007 for permission to erect buildings in Group Housing Scheme measuring 13.394 acres in Sector-1 Dharuhera in accordance with the plans submitted with it.

Permission is hereby granted for the aforesaid construction subject to the provisions of the Punjab Scheduled Roads & Controlled Areas Restriction of Unregulated Development Act, 1963, its rules and the zoning plan framed thereunder alongwith special reference to the following conditions: -

1. The plans are valid for a period of 2 years of the buildings less than 15.00 meters in height and 5 years for the multistoryed buildings from the date of issuance of sanction, subject to validity of licences granted for this scheme.
2. The structural responsibility of the construction shall be entirely of the owner/supervising architect/ Engineer of the scheme.

Further that: -

(a) A certificate from a recognized Structural Engineer shall be submitted to the department within 60 days of issuance of this letter that the structural design of the building is designed as per the provisions of NBC and relevant I.S. Code for all seismic load, all dead and live loads, wind pressure and structure safety from earth quake of the intensity expected under zone-IV.

(b) All material to be used for erection of building shall conform to I.S.I. and N.B.C. standards.

(c) No walls/celling shall be constructed of easily inflammable material and stair cases shall be built of the fire resisting material as per standard specification.

(d) The roof slab of the basement external to the buildings if any shall be designed/ constructed to take the load of fire tender up to 45 tones.

3. FIRE SAFETY:

The colonizer firm and the Supervising Architect of the project shall be entirely responsible for making provisions of fire safety and fire fighting measures and shall abide by all fire safety bye laws.

Further, the colonizer firm shall also prepare and submit the plans in triplicate to Executive Officer, Municipal Council, Rewari, clearly marked and indicating the complete fire protection arrangements and means of escape/ access for the proposed building with suitable legend and standard signs.

Annexured - III

On receipt of the above request the Executive Officer, Municipal Council, Rewari after satisfying himself that the entire fire protection measures proposed for the above buildings are as per NBC and other Fire Safety Bye Laws, forward the same to the Director, Urban Development, Haryana who would issue a NOC from Fire Safety and means of escape/access point of view. This clearance/ NOC from Fire Authority shall be submitted in this office alongwith a set of plans duly signed by the Executive Officer, Municipal Council, Rewari and countersigned by the Director, Urban Development, Haryana within a period of 90 days from the date of issuance of sanction of building plans. Further, it is also made clear that no permission for occupancy of the building shall be issued by the Director unless he is satisfied that adequate fire fighting measures have been installed by you and suitable external fire fighting infrastructure has been created at Rewari, by Urban Development Department. A clearance to this effect shall be obtained from the Director, Urban Local Bodies before grant of occupation certificate by the Director.

4- The provision of letter boxes for each dwelling unit shall be made at the ground floor of each building.

5. No addition and alteration in the building plans/ layout plan shall be made without the prior approval of DTCP. Further only figured dimensions shall be followed and in case of any variation in the plans, prior approval of DTCP shall be pre-requisite.

6. That you shall furnish the service plan estimate of this scheme in accordance with approved building plans within 60 days from the date of issue of this letter.

7. Based on the actual estimated cost of internal development of the group housing colony you shall furnish additional bank guarantee if required within 60 days of approval of the service plans.

8. The revenue rasta if any passing through the site shall be kept unobstructed.

9. If any infringement of bye-laws remains unnoticed, the department reserves the right to amend the plan as and when any such infringement comes to its notice after giving an opportunity of being heard and the department shall stand indemnified against any claim on this account.

10. The layout showing the electric installation shall have to be got approved from the Electrical Inspector, Haryana before execution of work at site.

11. No person shall occupy or allow any other person to occupy any new building or part of the same for any purpose what so ever until such building or part thereof has been certified by the Director or any person authorized by him in this behalf as having been completed in accordance with the permission granted and an occupation certificate in prescribed form has been duly issued in your favour.

12. Before grant of occupation certificate, you shall have to submit a notice of completion of the building in form BR-IV alongwith BR-V regarding completion of works described in the plans and it shall be accompanied by:

(i) Structural stability certificate duly signed by the recognized Structural Engineer.

(ii) A clearance from Fire Safety point of view from the M.C., Rewari.

13-The parking lots proposed in the scheme shall be exclusively for the use of flat owners/residents of the group housing scheme. The parking lot shall not be leased out /transferred to any person who is not a flat owner /resident of the group housing

complex. The parking lots shall form part of common areas along with other common uses, in the declaration to be filed under Apartment Ownership Act, 1983.

14. WATER SUPPLY

(i) The down take system shall be provided by you by providing clear water storage tank of not less than half day storage of water for domestic usage on the top of the building block. The capacity of the tank as shown on the plans and down take system/thereof are as under: -

Sr. No.	Name of building/ Tower	For Domestic use in liters.	Inlet size in mm	Outlet size in mm
1	Type-A, Block-1,2,9 and 10	4x31,000	65MM	80,65,50,40,32,25MM
2	Type-B, Block-3,4,5,6,7 and 8	6x25,000	65MM	80,65,50,40,32,25MM
3	Type-C	1x31,000	65MM	80,65,50,40,32,25MM
4	Community Centre	38,000	50MM	65,50,40,32,25MM
5	EWS	20,000	40MM	50,40,32,25MM
6	Shops	1x1,000	25MM	20MM
7	UGT	45,000		

(ii) Inlet pipes from down take to toilet shall be 25/20/15 mm dia as shown on the plans and connection to each individual fixture.

(iii) The firm has proposed clear water overhead tanks on the tops the buildings blocks therefore case for the clearance from the Air Traffic Authority may sent by the DTCP office.

(iv) The Adequate booster pumps to boost the water in the water tanks with 100% stand by arrangement shall be provided by you. It is made clear that you shall be sole responsible for boosting arrangement all the time.

(v) The alternative arrangement of power supply, such as Gen. Set etc. of suitable capacity shall also be provided by you during failure of electricity.

vi) You will be provided Solar Water heater system on top of roof of each block.

15. SEWERAGE:

(i) All external sewerage lines should not be less than 200 mm dia pipes.

(ii) All soil pipe connection W.C. to soil stack/ manhole shall be 100 mm dia as shown on the plans.

(iii) Waste water pipes connecting F.T. to G.T. and F.T. to waste water stack shall be 100/75 mm dia as shown on the plans.

(iv) Waste water stack shall be 100mm/75mm dia as shown on the plans and soil stack shall be 100mm dia.

(v) All F.T. shall be 75mm dia.

(vi) All W.C. shall be provided with high/low levels flushing cistern. The capacity of flushing cistern shall be 8 ltrs.

(vii) All pipes from waste water stack to IC and IC to Manhole shall be 100 mm dia as shown on the plans.

(viii) You shall provide suitable approach/ ventilation arrangement by providing inspection window/ duct etc. for repairing of piping system.

(ix) The invert level of main sewer be checked by you prior to taking of connection/construction works.

16. Storm Water Drainage

(i) You have provided basement for services and parking only. For draining out the wash water/ rain water accumulated in the lower basement shall be collected through covered channel of 300 mm wide to the sumps at different places and from where the pumping has been proposed by you by providing pumps of 300 L.P.M. capacity at 7.00 metres head. Thus it is made clear to you that you shall be sole responsible for pumping out of rain water/ wash water etc. all the time and 100% standby pumps alternate power supply arrangement of Electricity shall also be provided by you during the failure of electricity/ breakdown.

(ii) All external storm water drainage shall be provided suitably so as to dispose of rain water in to external system of the Town.

(iii) All rain water stack pipes shall be 100/150 mm dia pipes as shown on the plans.

17. GENERAL:-

(i) You shall provide alternative source of electricity for functioning of water supply, sewerage and storm water drainage scheme by providing Gen. Set of required capacity.

(ii) All pipes, fixtures, fitting, pumps, Gen. set and filtration plant etc. shall be conforming to relevant IS specification and ISI marked.

(iii) You shall provide the minimum openable apurture of $1/8^{th}$ of the floor area of the habitable room and in case of kitchen the area of opening shall be increased by 25 percent.

(iv) The community building shall be included by you as a part of the common areas of the group housing colony while filling the declaration under the Apartment Ownership Act and such community center shall be for the exclusive use of the residents of this group housing colony only.

(v) You shall provide proper filtration plant for filtration and recycling of the water of the swimming pools, only small quantity of water shall be used for replacement of water in the swimming pools.

(vi) The swimming pools shall not be connected with the storm water drain for the disposal of replacement water.

(vii) You shall dispose off the replacement water by using the same for watering of landscaped area in the colony or the same may be disposed off into the rain water harvesting system.

(viii) That before making swimming pool operational you shall provide life guards and safety equipments like swimming jackets and first aid box etc. in sufficient numbers and clearance from District Administration regarding provision of above safety measures will be obtained.

(ix) That you shall obtain the clearance/NOC as per the provisions of the Notification No. S.O. 1533 (E) Dated 14.9.2006 issued by Ministry of Environment and Forest, Government of India before starting the construction/execution of development works at site.

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

(x) That the provision of solar water heating system shall be as per norms specified by HAREDA and shall be made operational in the each building block before applying for an occupation certificate.

(xii) That the colonlser/owner shall use only Compact Fluorescent Lamps fitting for internal lighting as well as Campus lighting.

(xiii) That you shall deposit the due amount of EDC with in three months from the issuance of this letter alongwith 18% interest.

This sanction will be void abnitio, if any of the conditions mentioned above are not complied with.

DA/One set of Building Plans

V.I – 3
District Town Planner (HQ) VK,
Member Secretary,
For: Chief Town Planner, Haryana-cum-Chairman,
Building Plan Approval Committee.

Endst. No: dated

A copy is forwarded to the following for information:-

1- Director, Urban Local Bodies, Haryana, Chandigarh.
2- Senior Town Planner, Gurgaon with reference to his office memo no. 3218 dated 10.8.2007.
3- Superintending Engineer (HQ) HUDA, Panchkula w.r.t. his memo no. 11245 Dated 10.8.2007.
4- Distt. Town Planner, Rewari alongwith one set of building plans and with a direction to ensure the condition 17(ix) is complied with.

Encl: as above

District Town Planner (HQ) VK,
Member Secretary,
For: Chief Town Planner, Haryana-cum-Chairman,
Building Plan Approval Committee.

BR-III
(See Rule 44)
DIRECTORATE OF TOWN & COUNTRY PLANNING, HARYANA
SECTOR-18, CHANDIGARH.
Tele-Fax: 0172-2548475; Tel.: 0172-2549851, E-mail: tcphry@gmail.com
Website www.tcpharyana.gov.in

Memo No. ZP-233/JD(BS)/2013/ 32038 Dated:- 1/3/13.

To

Mudra Finance Ltd.
Vipul Tech Square, Golf Course Road,
Sector-43, Gurgaon.

Subject:- Approval of revised building plans of 2 Nos. Nursery School and revised building plans of Group Housing Colony measuring 13.394 acres (Licence no. 40 of 2007 dated 25.01.2007) in Sector-1, Dharuhera being developed by Mudra Finance Ltd.

Reference your application dated 17.11.2012 and subsequent letter dated 28.12.2012 for permission to re-erect the buildings in Group Housing Colony measuring 13.394 acres (Licence no. 40 of 2007 dated 25.01.2007) in Sector-1, Dharuhera, in accordance with the plans submitted with it.

Permission is hereby granted for the aforesaid construction subject to the provisions of the Punjab Scheduled Roads & Controlled Areas Restriction of Unregulated Development Act, 1963, its rules and the zoning plan framed there under along with special reference to following conditions:-

1. The plans are valid for a period of 2 years of the buildings less than 15.00 meters in height and 5 years for the multistoried buildings from the date of issuance of sanction, subject to validity of licenses granted for this scheme.
2. The structural responsibility of the construction shall be entirely of the owner/ supervising architect/ Engineer of the scheme.

Further that: -

a) The building shall be constructed as per the structure design submitted by you and as certified by your structure engineer that the same has been designed as per the provisions of NBC and relevant IS code for all seismic load, all dead and live loads wind pressure and structural safely from earthquake of the intensity expected under Zone-IV.

b) All material to be used for erection of building shall conform to I.S.I. and N.B.C. standards.

c) No walls/ceiling shall be constructed of easily inflammable material and staircases shall be built of the fire resisting material as per standard specification.

d) The roof slab of the basement external to the buildings if any shall be designed/ constructed to take the load of fire tender up to 45 tones.

3. FIRE SAFETY:

The colonizer firm and the Supervising Architect of the project shall be entirely responsible for making provisions of fire safety and fire fighting measures and shall abide by all fire safety bye laws.

Further, the colonizer firm shall also prepare and submit the plans in triplicate to Municipal Council, Dharuhera, clearly marked and indicating the complete fire protection arrangements and means of escape/ access for the proposed building with suitable legend and standard signs.

4. On receipt of the above request the Municipal Council, Dharuhera after satisfying himself that the entire fire protection measures proposed for the above buildings are as per NBC and other Fire Safety Bye Laws, and would issue a NOC from Fire Safety and means of escape/access point of view. This clearance/ NOC from Fire Authority shall be submitted in this office alongwith a set of plans duly signed by the Municipal Council, Dharuhera within a period of 90 days from the date of issuance of sanction of building plans. Further, it is also made clear that no permission for occupancy of the building shall be issued by Municipal Council, Dharuhera unless he is satisfied that adequate fire fighting measures have been installed by you and suitable external fire fighting infrastructure has been created at Dharuhera, by Municipal Council, Dharuhera. A clearance to this effect shall be obtained from the Municipal Council, Dharuhera before grant of occupation certificate by the Director General. The provision of letter boxes for each dwelling unit shall be made at the ground floor of each building.
5. No addition and alteration in the building plans/ layout plan shall be made without the prior approval of DG,TCP. Further only figured dimensions shall be followed and in case of any variation in the plans, prior approval of DG,TCP shall be pre-requisite.
6. That you shall furnish the service plan/ estimate of this scheme in accordance with approved building plans within 60 days from the date of issue of this letter.
7. Based on the actual estimated cost of internal development of the group housing colony you shall furnish additional bank guarantee if required within 60 days of approval of the service plans.
8. The revenue Rasta if any passing through the site shall be kept unobstructed.
9. If any infringement of byelaws remains unnoticed, the department reserves the right to amend the plan as and when any such infringement comes to its notice after giving an opportunity of being heard and the department shall stand indemnified against any claim on this account.
10. The layout showing the electric installation shall have to be got approved from the Chief Electrical Inspector, Haryana before execution of work at site.

11. No person shall occupy or allow any other person to occupy any new building or part of the same for any purpose what so ever until such building or part thereof has been certified by the Director General or any person authorized by him in this behalf as having been completed in accordance with the permission granted and an occupation certificate in prescribed form has been duly issued in your favour.

12. Before grant of occupation certificate, you shall have to submit a notice of a completion of the building in form BR-IV alongwith BR-V regarding completion of works described in the plans and it shall be accompanied by:

(i) Structural stability certificate duly signed by the recognized Structural Engineer.

(ii) A clearance from Fire Safety point of view from the Municipal Council, Dharuhera.

13. The basements shall be used for parking and services as prescribed in the approved zoning plan and building plans. The parking lots proposed in the scheme shall be exclusively for the use of flat owners/residents of the group housing scheme. The parking lot shall not be leased out /transferred to any person who is not a flat owners /residents of the group housing complex. The parking lots shall form part of common areas along with other common uses, in the declaration to be filed under Apartment Ownership Act, 1983.

14. WATER SUPPLY:

(i) The down take system shall be provided by you by providing clear water storage tank of not less than half day storage of water for domestic usage on top of the building block. The capacity of the tank as shown on the plan and down take system thereof is as under: -

Sr. No.	Name of Building	Capacity of Tank of Domestic Use	Up Pipe in mm.	Down Pipe in mm.
1.	Tower-3,4,5,6,7,8,9 & 10 (Dom)	8x20000 Ltrs.	50mm	100/80/65/50/40/32/25/20mm.
	Flushing	8×10000 Ltrs.	40mm	80/65/50/40/32/25/20 mm.
2.	Tower-1 & 2 (Dom)	2×23000 Ltrs.	50mm	100/65/50/40/32/25/20 mm.
	Flushing	2×13000 Ltrs.	40mm	80/50/50/40/32/25/20 mm.
3.	Tower- 11 (Dom)	1×18000 Ltrs.	50mm	80/65/50/40/32/25/20mm
	Flushing	1×10000 Ltrs.	40mm	65/50/40/32/25/20mm.
4.	EWS (Tower-12) (Dom)	1x20000 Ltrs.	50mm	80/65/50/40/32/25/20mm
	Flushing	1x10000 Ltrs.	40mm	65/50/40/32/25/20mm

5.	Community Building-I with shops (Dom)	1x5000 Ltrs.	25mm	32/25/20mm
6.	Community Building-I with shops (Dom)	1x7000 Ltrs.	40mm	32/25/20mm
	Flushing	1x3000 Ltrs.	32mm	40/32/25/20mm
7.	Nursery School No. 1 & 2 (Dom)	2x2000 Ltrs.	20mm	25/20mm
	UGT (Dom)	4,00,000 Ltrs.		

(ii) Inlet pipes from down take to toilet shall be 25/20/15 mm dia as shown on the plans and connection to each individual fixture shall be 15 mm dia.

(iii) The adequate booster pumps to boost the water in the water tanks with 100% standby arrangement shall also be provided by you. It is made clear that you shall be solely responsible for boosting arrangement all the time.

(iv) The alternative arrangement of power supply, such as Gen. Set etc. of suitable capacity shall also be provided by you during failure of electricity.

15. SEWERAGE:

(i) All external sewerage lines should not be less than 200 mm. dia Pipes.

(ii) All soil pipe connection W.C. to soil stack / manhole shall be 100 mm dia as shown on the plans.

(iii) Waste water stack shall be 100/75 mm dia as shown on the plans and soil stack shall be 100 mm dia.

(iv) All F.T. shall be 75 mm dia.

(v) All W.C. shall be provided with high / low level flushing cistern. The capacity of flushing cistern shall be of 8 Ltrs.

(vi) All pipes from waste water stack to I.C. and I.C. to manhole shall be 100 mm dia as shown on the plans.

(vii) Suitable approach/ ventilation arrangement shall be provided by you by providing inspection window/ duct etc. for repairing of piping system.

16. STORM WATER DRAINAGE:

(i) You have provided twin level basement except under tower already approved for services and parking only. For draining out the wash water/rain water accumulated in the lower basement shall be collected through covered channel of 300 mm wide to the sumps at different places and from where the pumping has been proposed by the you by providing pumps of 300 LPM capacity at 14.00 meters head. Thus it is made clear to you that you shall be sole responsible for pumping out of rain water/ wash water etc. all the time and 100%

standby pumps alternate power supply arrangement shall also be provided by you during the failure of electricity/ breakdown.

(ii) All external storm water drainage shall be provided suitably so as to disposal of rainwater in to the existing system of the colony.

(iii) All rainwater stack pipe shall be 100/150 mm dia pipes as shown on the plans.

(iv) It is made clear to you that roof top rain harvesting system shall be provided by you and shall be kept operational all the time.

17. GENERAL: -

(i) You shall provide alternative source of electricity for functioning of water supply, sewerage and storm water drainage scheme by providing Gen. set of required capacity.

(ii) All pipes, fixtures, fitting, pumps, Gen. set and filtration plan etc. shall be conforming to relevant IS specification and ISI marked.

(iii) You shall provide the minimum open able aperture of $1/8^{th}$ of the floor area of the habitable room and in case of kitchen the area of opening shall be increased by 25%.

(iv) That the colonizer shall obtain the clearance/NOC as per the provisions of the Notification No. S.O. 1533 (E) Dated 14.09.2006 issued by Ministry of Environment and Forest, Government of India before starting the construction/execution of development works at site.

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

(vi) The community centre/centres shall form part of the common areas and facilities of the group housing colony as defined under the Apartment Ownership Act and the same shall be defined as such in the deed of declaration to be filed under the Apartment Ownership Act. Such community centre/centres shall be for the exclusive use of residents of this group housing colony only. You shall submit an undertaking in the form of an affidavit to the above effect within a period of ten days from the issuance of this approval.

(vii) That the provision of solar water heating system shall be as per norms specified by HAREDA and shall be made operational in the each building block before applying for an occupation certificate.

(viii) That the colonizer/owner shall use only Compact Fluorescent Lamps fitting for internal lighting as well as Campus lighting.

(ix) That you shall submit the soft copy of the approved building plans of this scheme within one week to this office from the issuance of this letter.

(x) That you shall deposit the labour cess in future, time to time as per construction of work done at site.

(xi) That if any, site for Electric Sub Station is required same will be provided by you in the group housing colony.

(xii) The replacement water shall be disposed off by you by using the same for watering of landscaped area in their colony or the same is disposed off into the rain water harvesting system.

(xiii) Recycled water is proposed to be utilized for flushing purpose. The firm has made provision of separate flushing line, storage tank, metering system, pumping system and plumbing. It is clarified to you that no tap or outlet of any kind will be provided from the flushing lines/plumbing lines for recycled water except for connection to the cistern of flushing tanks and any scouring arrangement. Even ablution taps should be avoided.

(xiv) No cross connection between recycled water system and potable water system shall be made.

(xv) All plumbing pipes fittings, valves will be of red colour or painted red. In case of embedded pipes. Marker taps of red colour at suitable intervals shall be fixed. The underground and over head tanks should have. Recycle water not fit for drinking and other warning signs embossed/marked on them.

(xvi) Recycled water pipes and potable water pipes will be fixed in separate chases and a minimum horizontal distance of 6" (150mm) will be mentioned between them. In case of cross suitably coloured / taped sleeve shall be used.

(xvii) Alternative source of electricity shall be provided by you for functioning of water supply, sewerage, SWD, Scheme by providing Gen. set of required capacity.

(xviii) The colonizer/firm will provide appropriate pipes (both up and down) for solar water heating system.

(xix) The replacement water shall be disposed off by the colonizer by using the same for watering of landscaped area in their colony or the same may be disposed off into the rain water harvesting system.

(xx) That no separate zoning plan is approved for community sites earmarked within a Group Housing Colony. The community building/buildings shall be constructed by the colonizer/owner as per

provision of The Haryana Development and Regulation of Urban Areas (Amendment and Validation) Act No. 4 of 2012, failing which the said site shall vest in the Government.

(xxi) That the owner shall construct the EWS flats within 2 years and give the advertisement in the newspapers for inviting the application for EWS flats in their Group Housing Colony within 12 months from the issuance of this sanction letter.

(xxii) The provision of parking shall be made within the area earmarked / designated for parking in the colony and no vehicle shall be allowed to park outside the premises.

This sanction will be void abnitio, if any of the conditions mentioned above are not complied with.

DA/One set of Building Plans.

(Sunita Sethi)
District Town Planner (HQ),
Member Secretary,
For: Chief Town Planner, Haryana-cum- Chairman,
Building Plan Approval Committee.

Memo No. ZP-233/JD(BS)/2013/_____ Date:-_____

A copy is forwarded to the following for information: -

1. Chairman, Pollution Control Board, Haryana, Sector-6, Panchkula.
2. Senior Town Planner, Gurgaon.
3. Superintending Engineer (HQ) HUDA.
4. Distt. Town Planner, Rewari alongwith one set of building plans.

Encl: as above

(Sunita Sethi)
District Town Planner (HQ),
Member Secretary,
For: Chief Town Planner, Haryana-cum- Chairman,
Building Plan Approval Committee.

Annexure 28

Thermal Characteristics of Building Envelop

- Climate zone is Composite.
- U values: (24 hr Use Building), these will be within the maximum standards mentioned in ECBC-2007, Table no 4.3.1, 4.3.2, 4.3.3-1 pg. no.7, 8 & 9

Following U-values have been considered while carrying out the load calculations.

Description	**R Value**	**U Value**
	m^2-^{0}C/W	**W/m^2 ^{o}C**
Roof	3.5	0.261
External Wall	2.20	0.369

Some of the measures taken to have better energy efficiency are as follows:

- It is proposed to have dimmer lighting systems in functional area where luminance can be controlled as per the requirement.
- It is also proposed to have motion sensors in the basement parking areas
- It is proposed to control all Common area lighting with photocell controllers which will switch on / off and dim the lights according to the ambient light conditions.
- 33 % Solar lighting system is being proposed in the Landscaping and the Open paved area.
- Exterior lighting like façade, common area etc are controlled by astronomical / timer switches to select the time and fittings there by required fittings are switched on at required time to save the power.
- Fly ash bricks and pavers will be used.

Glass characteristics:

			U-value (Btu/H-Ft2-0F)	**W/M2-0F**	
A	**Roof**	225 mm thick HW concrete, 50 mm thick expanded polyethylene trafelt roll & build-up roofing.	0.08	0.45	

B	**Wall**	200 mm thick heavy weight concrete block, plastered inside/outside, 10 mm of POP inside 50 mm air gap and 35 mm thick sand stone dry cladding.	0.20	1.13	
	Glass		**U-value (Btu/H-Ft2-0F)**	**Shading Coefficient (SC)**	**Visible Light Transmittance (VLT)**
A	**Public Areas**	12.76 (6mm clear tampered + 0.76 pvb+ 12 mm air gap + 9.52(4 mm tampered+ 1.52 pvb +4 mm tampered)	0.36	0.50	57%
B	**Flats**	12 mm (6 mm clear+6 mm synergy glaverbel)	0.70	0.60	65%

Contact : +91 - 9810243570

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Contact No. : 9818405427, 9711159210, 9711159337, 9871800216, 9711163422, +91-120-2867931, 2867940

TEST REPORT

Water Sample Analysis

Test Report No. : EKO/EV-WA/002/210115 **Issue Date** : 24/01/2015

Issued To : VIPUL GARDEN
DARUHERA
HARYANA

Sample Description	:	Ground water
Sample Drawn on	:	20/01/2015
Sample Drawn by	:	EPEPL(Mr. Vimal Kumar)
Sample Received on	:	21/01/2015
Sampling Location	:	NA
Sampling Plan & Procedure	:	SOP-W/66
Sample Quantity	:	5.0 Litre
Environmental Condition	:	Normal
Analysis Duration	:	21/01/2015 To 24/01/2015
Remark (if any)	:	NA

RESULTS

S.No.	PARAMETER	Test Methods	Results	Units
1	Colour	IS : 3025 (P-4)	< 5.0	Hazen
2	Odour	IS : 3025 (P-5)	Agreeable	-
3	Taste	IS : 3025 (P-7)	Agreeable	-
4	Turbidity	IS : 3025 (P-10)	< 1.0	NTU
5	pH	IS : 3025 (P-11)	7.42	-
6	Total Hardness (as CaCO3)	IS : 3025 (P-21)	236.0	mg/L
7	Calcium (as Ca)	IS : 3025 (P-40)	48.9	mg/L
8	Iron (as Fe)	IS : 3025 (P-53)	0.14	mg/L
9	Chloride (as Cl)	IS : 3025 (P-32)	66.4	mg/L
10	Residual Free Chlorine	IS : 3025 (P-26)	< 0.2	mg/L
11	Fluoride (as F)	IS : 3025 (P-60)	< 1.0	mg/L
12	Total Dissolved Solids	IS : 3025 (P-16)	480.0	mg/L
13	Magnesium (as Mg)	IS : 3025 (P-46)	27.7	mg/L
14	Copper (as Cu)	IS : 3025 (P-42)	< 0.01	mg/L
15	Manganese (as Mn)	IS : 3025 (P-59)	< 0.1	mg/L
16	Sulphate (as SO4)	IS : 3025 (P-24)	51.4	mg/L
17	Nitrate (as NO3)	IS : 3025 (P-34)	29.4	mg/L
18	Phenolic Compounds (as C6H5OH)	IS : 3025 (P-43)	< 0.001	mg/L
19	Mercury (as Hg)	IS : 3025 (P-48)	< 0.001	mg/L
20	Selenium (as Se)	IS : 3025 (P-56)	< 0.005	mg/L
21	Arsenic (as As)	IS : 3025 (P-37)	< 0.005	mg/L

Contact : +91 - 9810243670

EKO PRO ENGINEERS PVT. LTD.

(Analytical Division)

(An ISO 9001: 2008 Certified Company)

Office & Laboratory : 32/41, South Side of G. T. Road, UPSIDC Industrial Area, Ghaziabad - 201 009, UP, INDIA
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Contact No. : 9818405427, 9711159210, 9711159337, 9871800216, 9711163422, +91-120-2867931, 2867940

Test Report No. : EK0/EV-WA/002/210115 **Issue Date** : 24/01/2015

S.No.	PARAMETER	Test Methods	Results	Units
22	Cyanide (as CN)	APHA 4500 CN-C	< 0.05	mg/L
23	Lead (as Pb)	IS : 3025 (P-47)	< 0.005	mg/L
24	Zinc (as Zn)	IS : 3025 (P-49)	< 0.05	mg/L
25	Chromium (as Cr+6)	IS : 3025 (P-52)	< 0.05	mg/L
26	Alkalinity (as CaCO3)	IS : 3025 (P-23)	316.0	mg/L
27	Aluminium (as Al)	IS : 3025 (P-55)	< 0.01	mg/L
28	Boron (as B)	IS : 3025 (P-57)	< 0.25	mg/L
29	Cadmium (as Cd)	IS : 3025 (P-41)	< 0.001	mg/L
30	Anionic Detergents (as MBAS)	APHA 5540-C	< 0.05	mg/L
31	Total Coliform	IS : 1622	Absent	Per100 mL
32	E.coli	IS : 1622	Absent	Per 100 mL

End of Report

Notes :

1. The results given above are related to the tested sample, as received & mentioned parameters. The customer asked for the above tests only.
2. This test report will not be generated again, either wholly or in part, without written permission of the Laboratory.
3. This test report will not be use for any publicity/legal purpose.
4. This test samples will be disposed off after two weeks from the date of issue of test report, unless until specified by the customer. Sample received for biological tests will be destroyed after 7 days from the date of issue of test report.
5. Responsibility of the Laboratory is limited to the invoiced amount only.

For EKO PRO ENGINEERS PVT. LTD

EKO PRO ENGINEERS PVT. LTD. GHAZIABAD

Authorized Signatory

Contact : +91 - 9810242870

EKO PRO ENGINEERS PVT. LTD.

(Analytical Division)

(An ISO 9001: 2008 Certified Company)

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Contact No. : 9818405427, 9711159210, 9711159337, 9871800216, 9711163422, +91-120-2867931, 2867940

TEST REPORT

Noise Monitoring

Test Report No. : EKO/EV-NM/106/210115 **Issue Date** : 23/01/2015

Issued To : VIPUL GARDEN
DARUHERA
HARYANA

Sample Description	:	Ambient Noise
Sample Drawn on	:	20/01/2015 To 21/01/2015
Sample Drawn by	:	EPEPL(Mr. Vimal Kumar)
Sample Received on	:	21/01/2015
Sampling Location	:	Near Main Gate
Sampling Plan & Procedure	:	SOP-N/01
Environmental Condition	:	Normal
Analysis Duration	:	21/01/2015 To 22/01/2015
Remark (if any)	:	NA

RESULTS

S.No.	PARAMETER	Test Methods	Results	Units
1	L Day	SOP-N/94/01	54.2	dB (A)
2	L Night	SOP-N/94/01	43.7	dB (A)

Notes :

End of Report

1. The results given above are ralated to the tested sample, as received & mentioned parameters. The customer asked for the above tests only.
2. This test report will not be generated again, either wholly or in part, without written permission of the Laboratory.
3. This test report will not be use for any publicity/legal purpose.
4. Responsibility of the Laboratory is limited to the invoiced amount only.

For EKO PRO ENGINEERS PVT. LTD.

Authorized Signatory

Contact : +91 - 9810243870

EKO PRO ENGINEERS PVT. LTD.

(Analytical Division)

(An ISO 9001: 2008 Certified Company)

Office & Laboratory : 32/41, South Side of G. T. Road, UPSIDC Industrial Area, Ghaziabad - 201 009, UP, INDIA.
e-mail : email@ekopro.in, eia@ekopro.in, support@ekopro.in, ekoproengineers@gmail.com, www.ekopro.in
Contact No. : 9818405427, 9711159210, 9711159337, 9871800216, 9711163422, +91-120-2867931, 2867940

TEST REPORT

Noise Monitoring

Test Report No. : EKO/EV-NM/105/210115 **Issue Date : 23/01/2015**

Issued To : VIPUL GARDEN
DARUHERA
HARYANA

Sample Description	:	Ambient Noise
Sample Drawn on	:	20/01/2015 To 21/01/2015
Sample Drawn by	:	EPEPL(Mr. Vimal Kumar)
Sample Received on	:	21/01/2015
Sampling Location	:	Near Construction Area
Sampling Plan & Procedure	:	SOP-N/01
Environmental Condition	:	Normal
Analysis Duration	:	21/01/2015 To 22/01/2015
Remark (if any)	:	NA

RESULTS

S.No.	PARAMETER	Test Methods	Results	Units
1	L Day	SOP-N/94/01	57.2	dB (A)
2	L Night	SOP-N/94/01	46.5	dB (A)

Notes : **End of Report**

1. The results given above are ralated to the tested sample, as received & mentioned parameters. The customer asked for the above tests only.
2. This test report will not be generated again, either wholly or in part, without written permission of the Laboratory.
3. This test report will not be use for any publicity/legal purpose.
4. Responsibility of the Laboratory is limited to the invoiced amount only.

For EKO PRO ENGINEERS PVT. LTD

Authorized Signatory

Contact : +91 - 9810243870

EKO PRO ENGINEERS PVT. LTD.

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Office & Laboratory : 32/41, South Side of G. T. Road, UPSIDC Industrial Area, Ghaziabad - 201 009, UP, INDIA.
e-mail : email@ekopro.in, eia@ekopro.in, support@ekopro.in, ekoproengineers@gmail.com, www.ekopro.in
Contact No. : 9818405427, 9711159210, 9711159337, 9871800216, 9711163422, +91-120-2867931, 2867940

TEST REPORT

Noise Monitoring

Test Report No. : EKO/EV-NM/104/210115 **Issue Date :** 23/01/2015

Issued To : VIPUL GARDEN
DARUHERA
HARYANA

Sample Description	:	Ambient Noise
Sample Drawn on	:	20/01/2015 To 21/01/2015
Sample Drawn by	:	EPEPL(Mr. Vimal Kumar)
Sample Received on	:	21/01/2015
Sampling Location	:	Back Side of Site Office
Sampling Plan & Procedure	:	SOP-N/01
Environmental Condition	:	Normal
Analysis Duration	:	21/01/2015 To 22/01/2015
Remark (if any)	:	NA

RESULTS

S.No.	PARAMETER	Test Methods	Results	Units
1	L Day	SOP-N/94/01	52.8	dB (A)
2	L Night	SOP-N/94/01	43.5	dB (A)

End of Report

Notes :

1. The results given above are ralated to the tested sample, as received & mentioned parameters. The customer asked for the above tests only.
2. This test report will not be generated again, either wholly or in part, without written permission of the Laboratory.
3. This test report will not be use for any publicity/legal purpose.
4. Responsibility of the Laboratory is limited to the invoiced amount only.

For EKO PRO ENGINEERS PVT. LTD

Authorized Signatory

Contact : +91 - 9810243870

EKO PRO ENGINEERS PVT. LTD.

(Analytical Division)

(An ISO 9001: 2008 Certified Company)

Office & Laboratory : 32/41, South Side of G. T. Road, UPSIDC Industrial Area, Ghaziabad - 201 009, UP, INDIA.
e-mail : email@ekopro.in, eia@ekopro.in, support@ekopro.in, ekoproengineers@gmail.com, www.ekopro.in
Contact No. : 9818405427, 9711159210, 9711159337, 9871800216, 9711163422, +91-120-2867931, 2867940

TEST REPORT

Ambient Air Quality Monitoring

Test Report No. : EK0/EV-AA/106/210115 **Issue Date :** 24/01/2015

Issued To : VIPUL GARDEN
DARUHERA
HARYANA

Sample Description	:	Ambient Air
Sample Drawn on	:	20/01/2015 To 21/01/2015
Sample Drawn by	:	EPEPL(Mr. Vimal Kumar)
Sample Received on	:	21/01/2015
Sampling Location	:	Near Main Gate
Sampling Plan & Procedure	:	SOP-AAQ/15
Analysis Duration	:	21/01/2015 To 24/01/2015
Sampling Time	:	24 Hrs.
Ambient Temprature (°C)	:	16.0
Average Flow Rate of SPM (m^3/min)	:	1.1
Average Flow Rate of Gases (lpm.)	:	1.0
Weather Conditions	:	Clear
Remark (if any)	:	NA

RESULTS

S.No.	PARAMETER	Test Methods	Results	Units
1	Particulate Matter (PM10)	IS:5182 (P-23)	73.4	µg/m3
2	SPM	IS:5182 (P-4)	209.6	µg/m3
3	Sulphur dioxide (as SO2)	IS:5182 (P-2) Improved West & Geake	12.1	µg/m3
4	Nitrogen Dioxide (as NO2)	IS:5182 (P-6)	23.2	µg/m3
5	Carbon Monoxide (as CO)	IS:5182 (P-10) Grab Method	< 1.15	mg/m3
6	Lead (as Pb)	IS:5182 (P-22)	< 0.1	µg/m3

End of Report

Notes :

1. The results given above are ralated to the tested sample, as received & mentioned parameters. The customer asked for the above tests only.
2. This test report will not be generated again, either wholly or in part, without written permission of the Laboratory.
3. This test report will not be use for any publicity/legal purpose.
4. This test samples will be disposed off after two weeks from the date of issue of test report, unless until specified by the customer.
5. Responsibility of the Laboratory is limited to the invoiced amount only.

For EKO PRO ENGINEERS PVT. LTD

EKO PRO ENGINEERS PVT. LTD. GHAZIABAD SAVE THE ENVIRONMENT

Authorized Signatory

Contact : +91 - 9810243870

EKO PRO ENGINEERS PVT. LTD.

(Analytical Division)

(An ISO 9001: 2008 Certified Company)

Office & Laboratory : 32/41, South Side of G. T. Road, UPSIDC Industrial Area, Ghaziabad - 201 009, UP, INDIA.
e-mail : email@ekopro.in, eia@ekopro.in, support@ekopro.in, ekoproengineers@gmail.com, www.ekopro.in
Contact No. : 9818405427, 9711159210, 9711159337, 9871800216, 9711163422, +91-120-2867931, 2867940

TEST REPORT

Ambient Air Quality Monitoring

Test Report No. : EKO/EV-AA/105/210115 **Issue Date** : 24/01/2015

Issued To : VIPUL GARDEN
DARUHERA
HARYANA

Sample Description	:	Ambient Air
Sample Drawn on	:	20/01/2015 To 21/01/2015
Sample Drawn by	:	EPEPL(Mr. Vimal Kumar)
Sample Received on	:	21/01/2015
Sampling Location	:	Back Side of Site Office
Sampling Plan & Procedure	:	SOP-AAQ/15
Analysis Duration	:	21/01/2015 To 24/01/2015
Sampling Time	:	24 Hrs.
Ambient Temprature (deg °C)	:	16.0
Average Flow Rate of SPM (m^3/min)	:	1.1
Average Flow Rate of Gases (lpm.)	:	1.0
Weather Conditions	:	Clear
Remark (if any)	:	NA

RESULTS

S.No.	PARAMETER	Test Methods	Results	Units	LIMIT AS PER EPA*
1	Particulate Matter (PM10)	IS:5182 (P-23)	66.1	µg/m3	100.0
2	SPM	IS:5182 (P-4)	178.1	µg/m3	-
3	Sulphur dioxide (as SO2)	IS:5182 (P-2) Improved West & Geake	10.2	µg/m3	80.0
4	Nitrogen Dioxide (as NO2)	IS:5182 (P-6)	25.6	µg/m3	80.0
5	Carbon Monoxide (as CO)	IS:5182 (P-10) Grab Method	< 1.15	mg/m3	4.0
6	Lead (as Pb)	IS:5182 (P-22)	< 0.1	µg/m3	1.0

*Details as per EPA-1986 National Ambient Air Quality Standards,date 18.11.2009

Notes :

End of Report

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For EKO PRO ENGINEERS PVT. LTD

Authorized Signatory

Contact : +91 - 9810243870

EKO PRO ENGINEERS PVT. LTD.

(Analytical Division)

(An ISO 9001: 2008 Certified Company)

Office & Laboratory : 32/41, South Side of G. T. Road, UPSIDC Industrial Area, Ghaziabad - 201 009, UP, INDIA.
e-mail : email@ekopro.in, eia@ekopro.in, support@ekopro.in, ekoproengineers@gmail.com, www.ekopro.in
Contact No. : 9818405427, 9711159210, 9711159337, 9871800216, 9711163422, +91-120-2867931, 2867940

TEST REPORT

Ambient Air Quality Monitoring

Test Report No. : EK0/EV-AA/104/210115 **Issue Date :** 24/01/2015

Issued To : VIPUL GARDEN
DARUHERA
HARYANA

Sample Description	:	Amblent Air
Sample Drawn on	:	20/01/2015 To 21/01/2015
Sample Drawn by	:	EPEPL(Mr. Vimal Kumar)
Sample Received on	:	21/01/2015
Sampling Location	:	Near Construction Area
Sampling Plan & Procedure	:	SOP-AAQ/15
Analysis Duration	:	21/01/2015 To 24/01/2015
Sampling Time	:	24 Hrs.
Ambient Temprature (°C)	:	18.0
Average Flow Rate of SPM (m^3/min)	:	1.1
Average Flow Rate of Gases (lpm.)	:	1.0
Weather Conditions	:	Clear
Remark (if any)	:	NA

RESULTS

S.No.	PARAMETER	Test Methods	Results	Units
1	Particulate Matter (PM10)	IS:5182 (P-23)	82.5	µg/m3
2	SPM	IS:5182 (P-4)	240.4	µg/m3
3	Sulphur dioxide (as SO2)	IS:5182 (P-2) Improved West & Geake	17.8	µg/m3
4	Nitrogen Dioxide (as NO2)	IS:5182 (P-6)	37.2	µg/m3
5	Carbon Monoxide (as CO)	IS:5182 (P-10) Grab Method	< 1.15	mg/m3
6	Lead (as Pb)	IS:5182 (P-22)	< 0.1	µg/m3

End of Report

Notes :

1. The results given above are ralated to the tested sample, as received & mentioned parameters. The customer asked for the above tests only.
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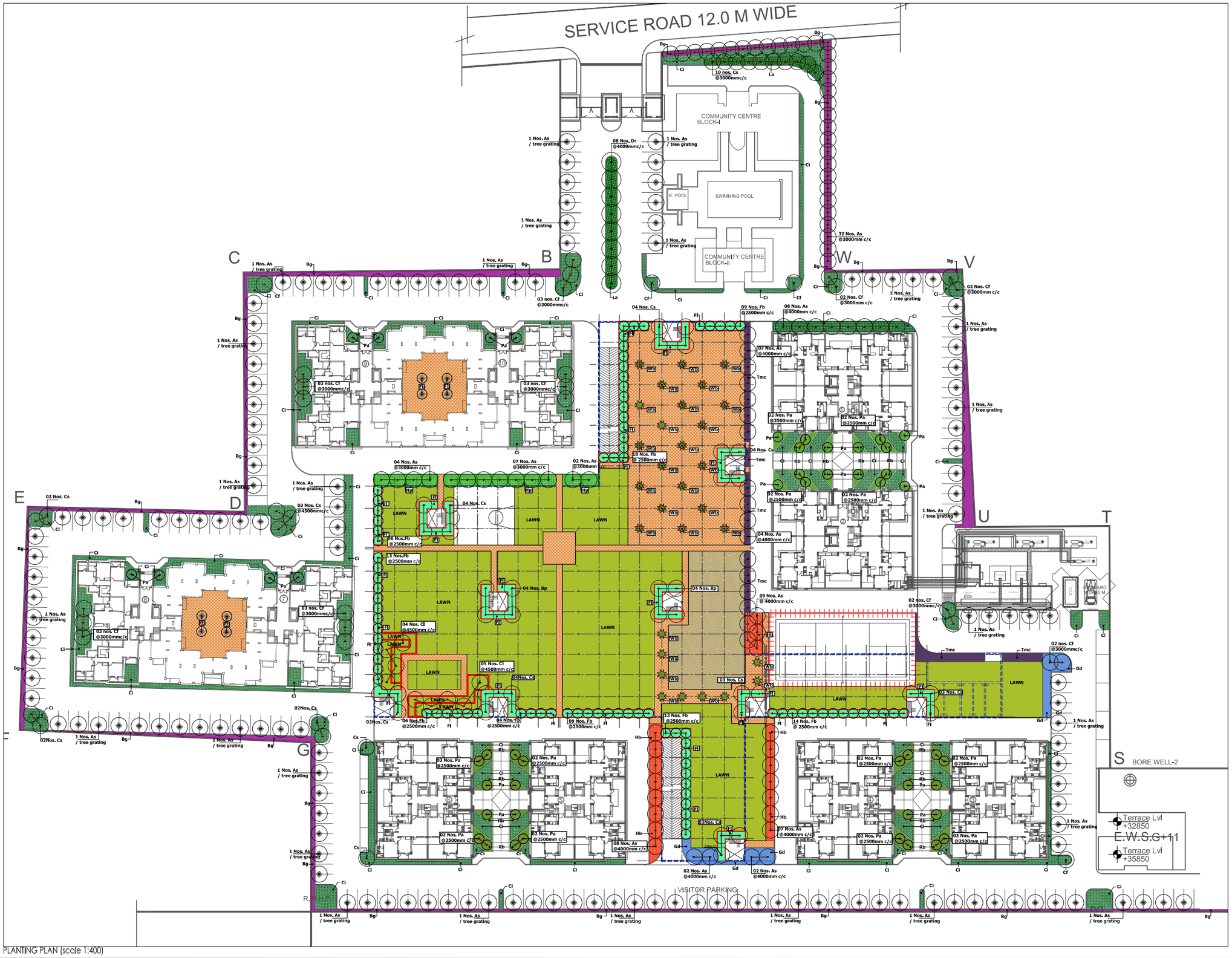
5. Responsibility of the Laboratory is limited to the invoiced amount only.

For EKO PRO ENGINEERS PVT. LTD

Authorized Signatory



PLANTING PLAN (scale 1:400)

LEGENDS

TREES

SYMBOL.		BOTANICAL NAME	SPACING.	QUANTITY
	As	Alstonia scholaris	@3000mm c/c & @5000mm c/c	245 Nos.
	Cs	Chorisia speciosa	@4500mm c/c	40 Nos.
	Pa	Plumeria alba (evergreen)	@2500mm c/c	36 Nos.
	Fb	Ficus benjamina	@2500mm c/c	100 Nos.
	Bp	Bauhinia purpurea	@6000mm c/c	08 Nos.
	Cl	Callistemon lanceolatus	@4500mm c/c	09 Nos.
	Wb	Wodyetia bifurcata	As specified	30 Nos.
	Cf	Cassia fistula	@3000mm c/c	25 Nos.
	Dr	Delonix regia	@4000mm c/c	08 Nos.

Shrubs/Climbers/Ground cover

Fl	Ficus longisland	@300mm c/c	6695 Nos.
Cl	Clerodendron inerme	@450mm c/c	6675 Nos.
Rb	Rhoeo bicolor	@450mm c/c	1510 Nos.
Gd	Golden duranta	@300mm c/c	1545 Nos.
Hb	Hibiscus (red)	@600mm c/c	550 Nos.
Hb	Hamelia patens	@450mm c/c	740 Nos.
Tmc	Tabernaemontana coronaria	@450mm c/c	780 Nos.
Bg	Bougainvillea (Mahara)	@300mm c/c	6780 Nos.
La	Lily amarills	@300mm c/c	700 Nos.
	LAWN (Goa Carpet selection-1)	No gaps	4236.70 Sq.m.

Architects
Architecture Department Vipul Ltd.
Vipul Tech Square
Golf Course Road, Gurgaon

Landscape
N M P Design
D-75, Freedom Fighter Colony, IGNOU Road
Neb Sarai, New Delhi - 110068, India
Ph.: 2953 2286

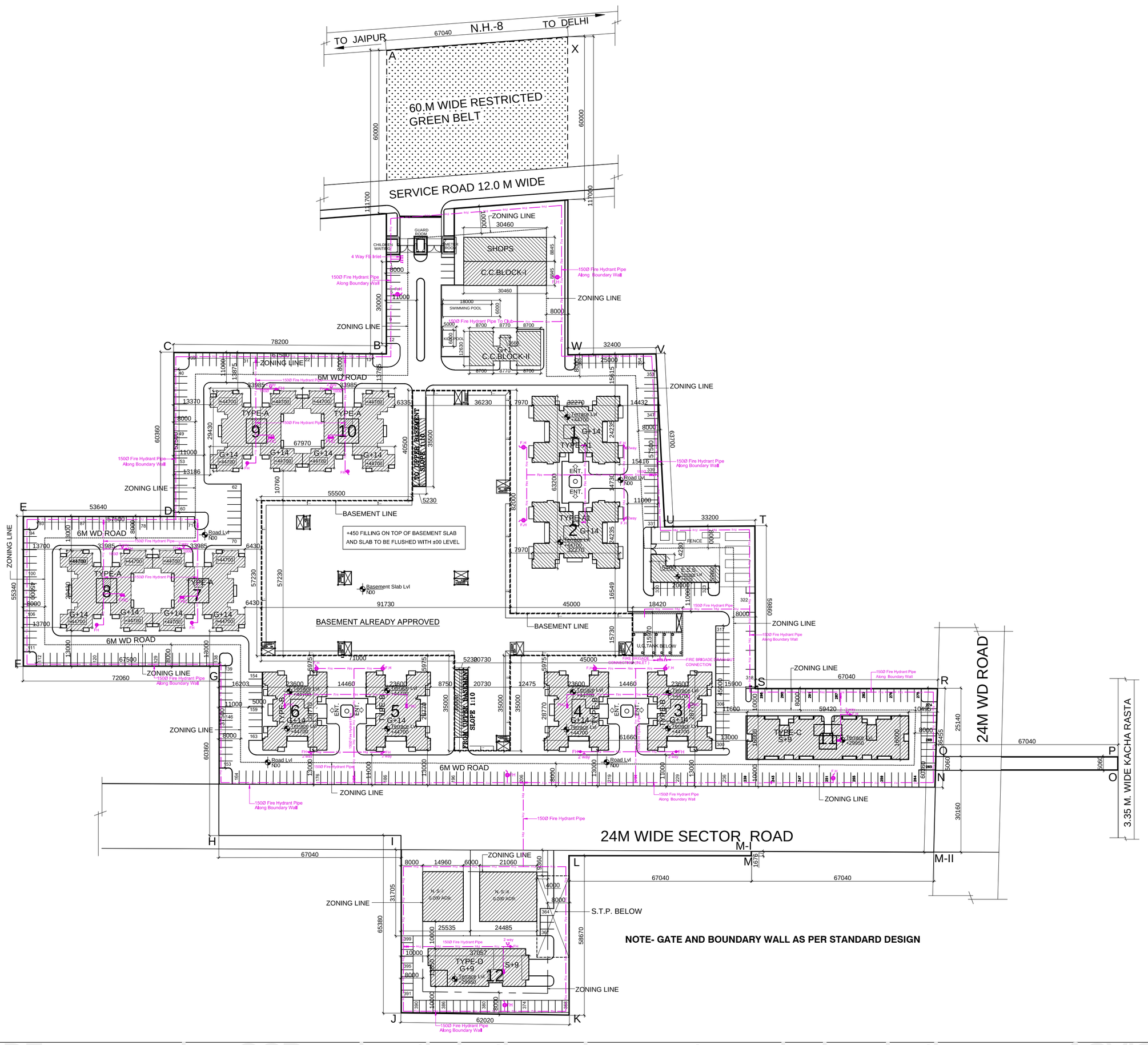
Clients:
MUDRA FINANCE LIMITED

Job Title
VIPUL GARDENS
DHARUHERA

Drawing Title
PLANTING PLAN

Drawn	Mayank	Date	Scale
Checked	Nandita Parikh	23-05-2012	As Shown
Revisions			

Drawing No.
VIPUL--DHAR-LSCAP--103



LEGEND:–	FIRE FIGHTING
	FIRE LINE
	FIRE HYDRANI (FH)
	2 WAY FIRE BRIGADE INLET
	4 WAY FIRE BRIGADE INLET
	FIRE HOSE CABINET

CLIENT'S SIGN.

ARCHITECT SIGN.

OWNER
M/S MUDRA FINANCE LTD.

PROJECT
REVISED GROUP HOUSING SCHEME FOR 13.394 ACS. AT SECTOR -1, DHARUHERA DISTT. REWARI (HARYANA)

SHEET TITLE
SITE PLAN (FIRE FIGHTING)

DEALT	SCALE		DRG.NO.
DS YADAV	1:600	N	D/SUB/SP-05A
CHKD. BY	DATE		
DS YADAV	NOV.-2012		

ARCHITECTS
VIPUL LIMITED
VIPUL TECH SQUARE,
SECTOR ROAD, SECTOR-43
GURGAON , HARYANA - 122002

Annexure 15: Fire and Safety

Adequate fire protection facilities will be installed including fire detectors, fire alarm and fire fighting system to guard the building against fires. All fire protection facilities will be designed as per the National Building Code given in 2005.

- Building is in Group A, sub Group A-4
- FIRE–ZONE No.1 (clause 3.2,2.2)

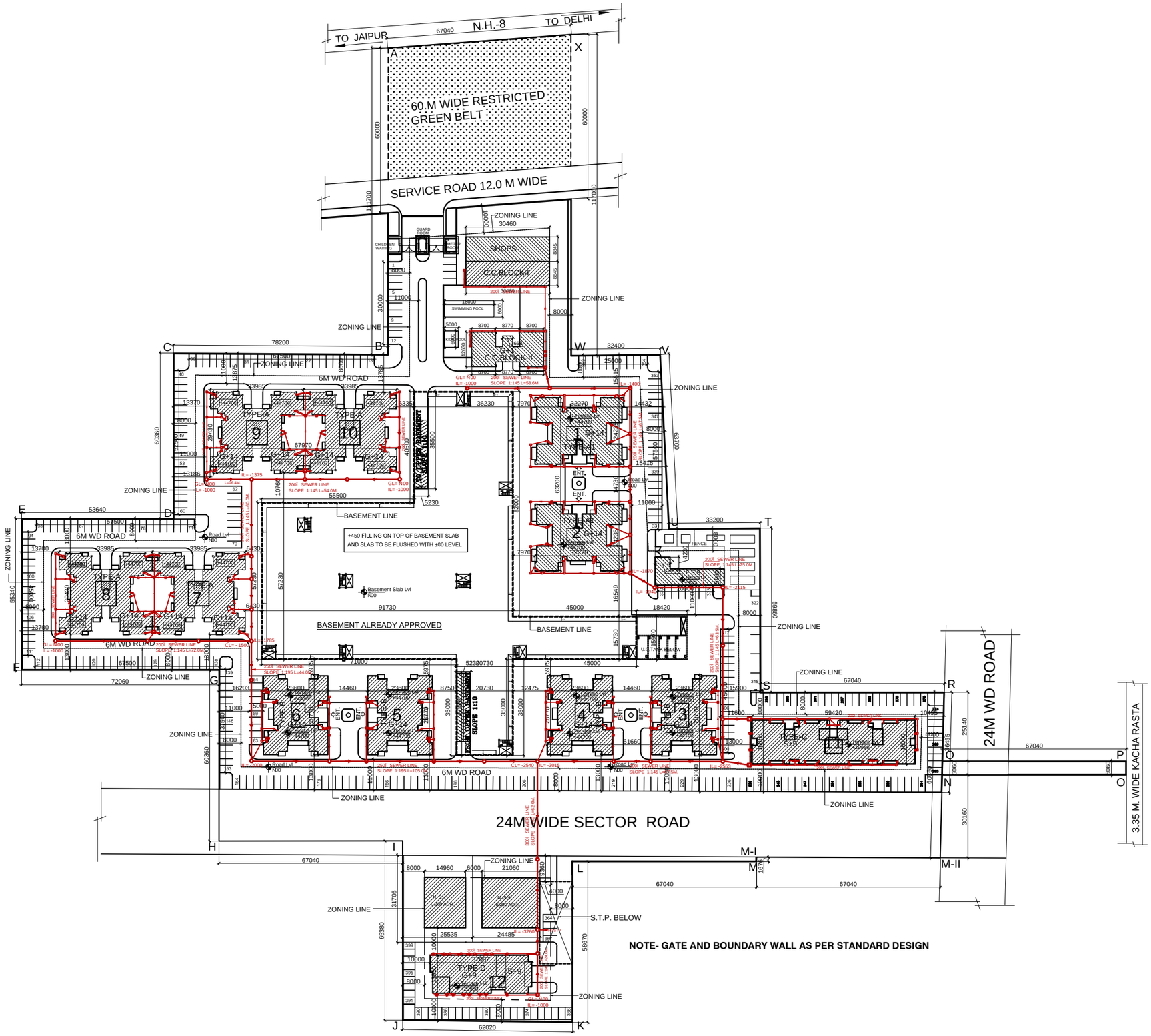
Following component/item will be provided:

Under the clauses (4.18.2, 6.1.2, 6.2.3, 6.3.2, 6.4.3, 6.5.2, 6.5.2.1, 6.5.2.2, 6.5.2.3, 6.5.2.4, 6.5.2.5, 6.6.2, 6.7.2, 6.8.2 and 6.9.2) following are minimum requirements for fire fighting installations.

- Fire Extinguishers
- Hose Reel
- Wet Riser
- Automatic Sprinkler System (including at basement)
- Manually Operated Electric Fire Alarm System
- Under Ground Static water storage tank -75000 lit
- Terrace Tank -10,000 lit

Based upon the Occupancy (Clause 4.3 Table 20, 21 and 22, NBC-2005):

	Unit	Value
Occupant load	m^2/person	12.5
Occupants per unit exit width	Number of occupants	Stairways-25 Ramps-50 Doors -75
Travel distance form occupancy	m	30



LEGEND:–	SEWERAGE
	SEWER LINE
M1	MANHOLE SEWER 900x800mm
	DEPTH.0.91M TO 1.67M - 910Ø DEPTH 1.68M TO 2.29M - 1220Ø DEPTH 2.29M TO ----------1520Ø
PIPE SLOPE	200Ø SW./RCC PIPE.SLOP 1:145 250Ø SW./RCC PIPE.SLOP 1:195 300Ø SW./RCC PIPE.SLOP 1:250

CLIENT'S SIGN.

ARCHITECT SIGN.

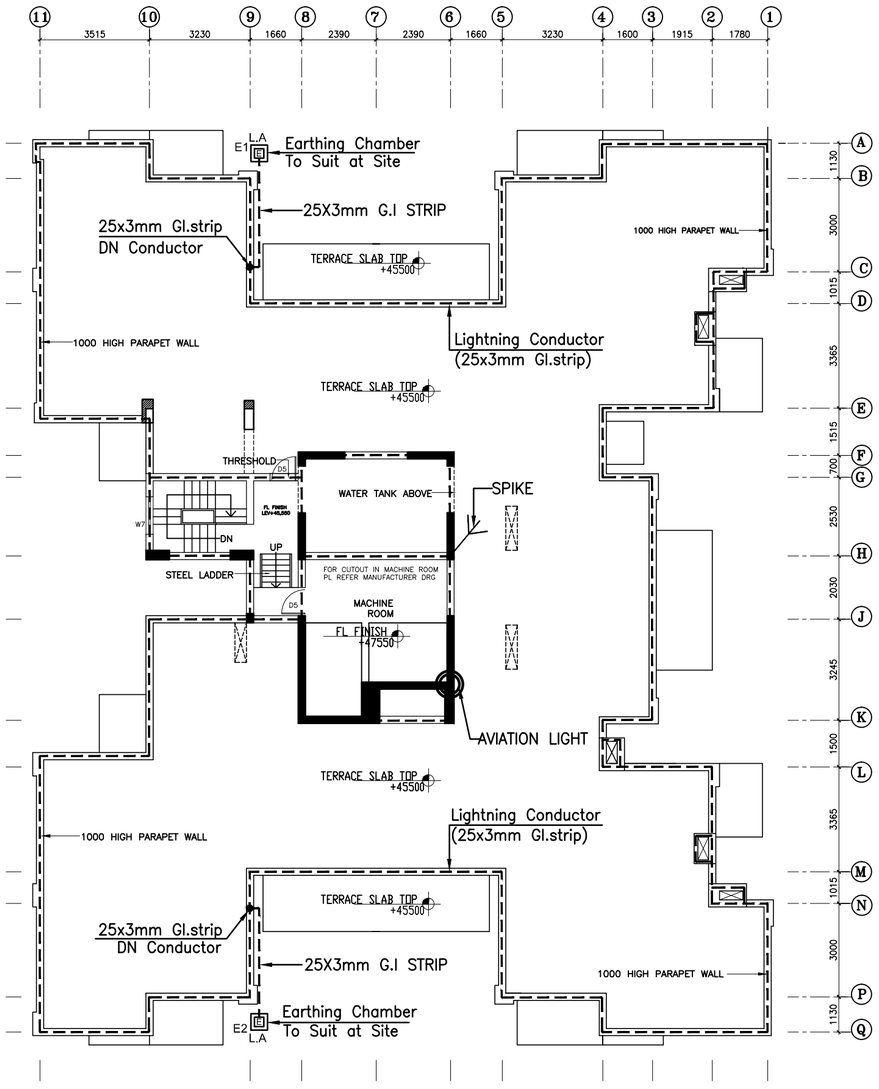
OWNER
M/S MUDRA FINANCE LTD.

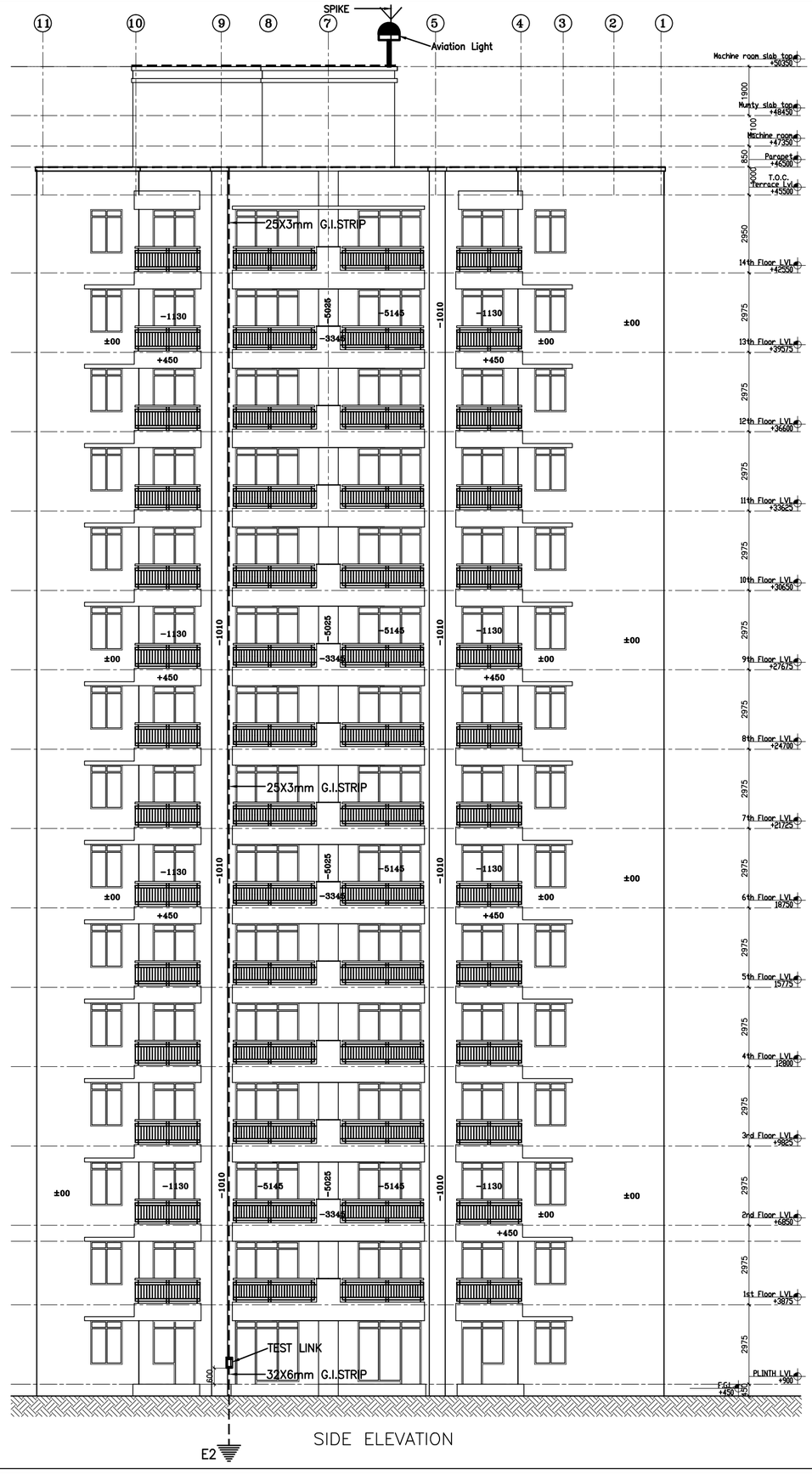
PROJECT
REVISED GROUP HOUSING SCHEME FOR 13.394 ACS. AT SECTOR -1, DHARUHERA DISTT. REWARI (HARYANA)

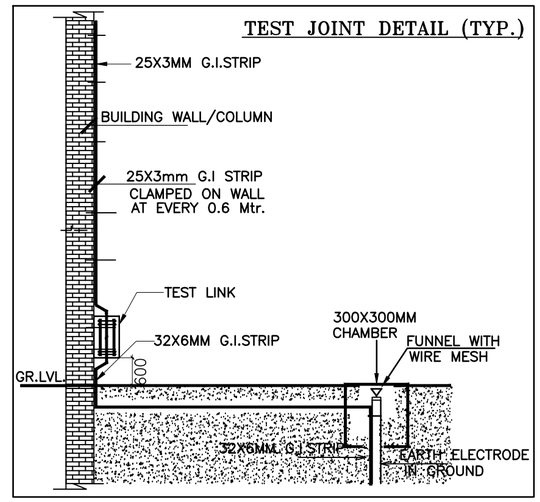
SHEET TITLE
SITE PLAN (SEWERAGE)

DEALT	SCALE		DRG.NO.
DS YADAV	1:600	N	D/SUB/SP-03A
CHKD. BY	DATE		
DS YADAV	NOV.-2012		

ARCHITECTS
VIPUL LIMITED
VIPUL TECH SQUARE,
SECTOR ROAD, SECTOR-43
GURGAON , HARYANA - 122002







PROJECT

VIPUL GARDENS

AT DHARUHERA,REWARI

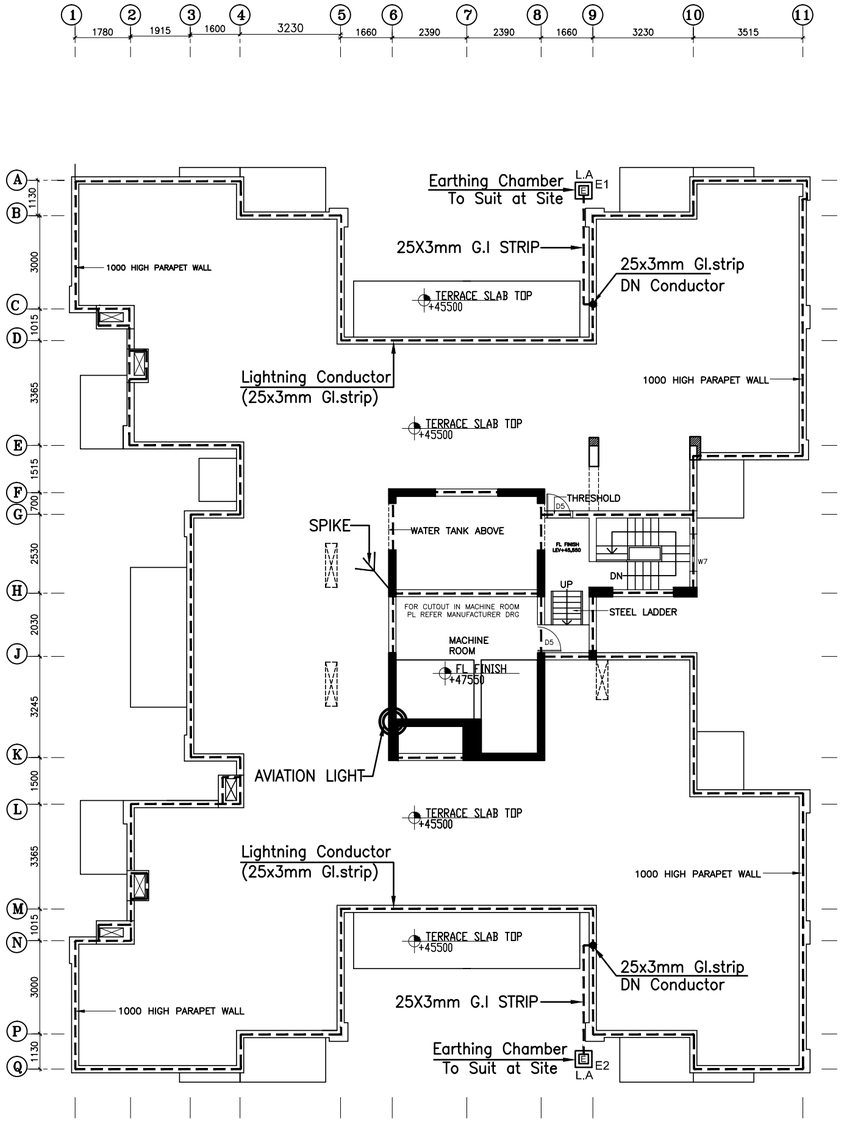
SHEET TITLE

LIGHTNING PROTECTION LAYOUT TERRACE PLAN (TOWER-4&6) (TYPICAL FOR TOWER-1,2,7,8,9&10)

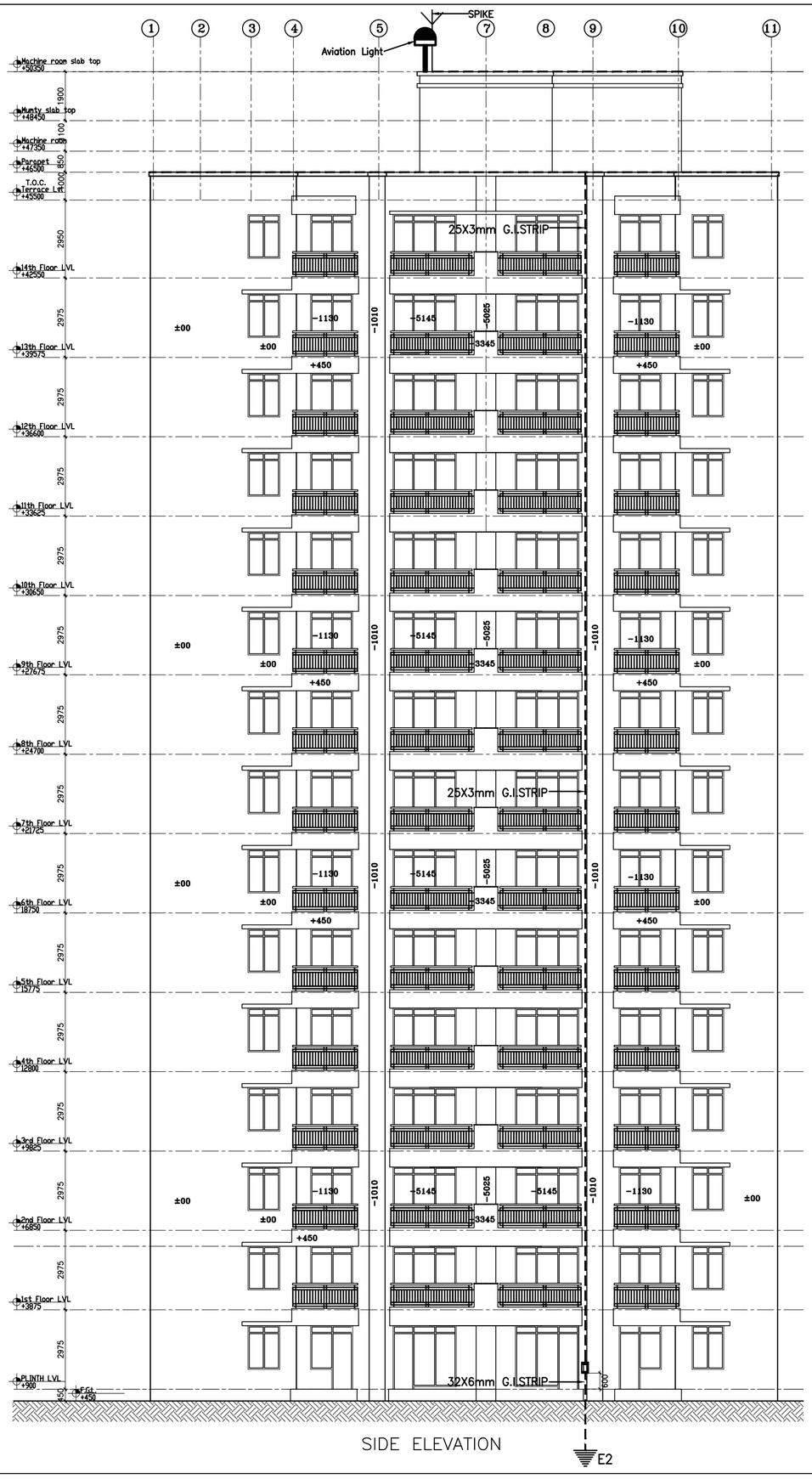
Architects

VIPUL LIMITED
VIPUL TECH SQUARE
GOLF COURSE ROAD
SEC-43,GURGAON
PH- 0124-4065500

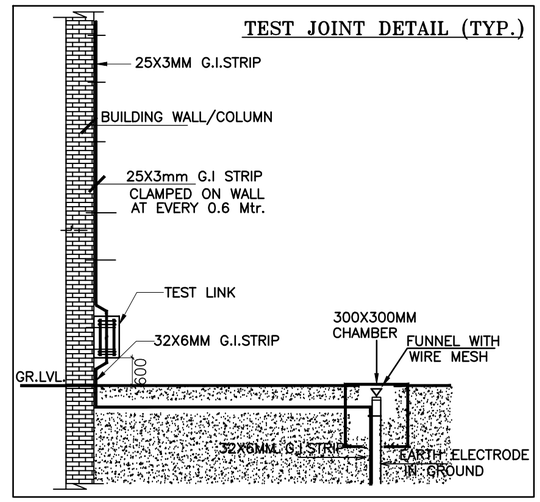
Scale	1:150	DRG.NO.	Rev.
Date	18-JUNE-2012	VGD/T-4&6/LTP-01	
Chkd.	AG	(TYP.FOR TOWER-1,2,7,8,9&10)	0
Dealt	ARVIND KUMAR		



LEGENDS:-	
- - - - - - -	25X3MM GI EARTH STRIP ON PARAPET WALL
- - - - - - -	32X6MM GI EARTH STRIP IN GROUND WITH EARTH ELECTRODE
▣	EARTH PIT



SIDE ELEVATION



PROJECT

VIPUL GARDENS
AT DHARUHERA,REWARI

SHEET TITLE

LIGHTNING PROTECTION LAYOUT TERRACE PLAN (TOWER-3&5)

Architects

VIPUL LIMITED
VIPUL TECH SQUARE
GOLF COURSE ROAD
SEC-43,GURGAON
PH- 0124-4065500

Scale	1:150	DRG.NO.	Rev.
Date	14-APRIL-2012	VGD/T-3&5/LTP-01	0
Chkd.	AG		
Dealt	ARVIND KUMAR		

Annexure 34

SITE PHOTOGRAPHS OF VUPUL GARDENS, DHARUHERA

ENERGY SAVING MEASURES

(As per ECBC)

Following measures will be taken to increase the energy-efficiency of proposed residential project:

- 33% of external street lights will be solar lights
- RCC slab with foam concrete insulation as well under deck thermal insulation of roof
- CFL lighting fixtures in the common areas and basements
- Star rated/ISI mark energy efficient motors and pumps for water supply & sewage pumping
- External glazing will be below 60% of the total vertical surface as per ECBC norms.
- CLC (Cellular lightweight concrete) blocks plastered on both sides
- Orientation of building is such so as to reduce the power consumption
- Adequate value of U & R for roofs and walls