

Office of Senior Geologist
Groundwater Surveys and Development Agency, GoM
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O.No/SGPune/GSDA/Tech/LGW/787/2024

Dated 21/08/2024

To,
Krisala Landmark Pvt Ltd
Through Vishal Jadhav
Hinjawadi, Taluka Mulshi,
District Pune

Subject- Regarding Hydrogeological Survey at Gat no.236 part & 237 part of Village Hinjawadi, Taluka Mulshi, District Pune

Reference- 1. Your Letter dated 20/08/2024
2. Hydrogeological Survey Challan dated 20/08/2024

With reference to the above subject hydrogeological survey was carried out at Gat no.236 part & 237 part of Village Hinjawadi, Taluka Mulshi, District Pune. At the time of hydrogeological survey Shri. Raut was present.

The details of Proposed site are as follows:

Name Of Village	Hinjawadi
Co-Ordinates	18°36'09.7" N and 73°43'45.7" E
Elevation	611 m
Toposheet	47 F/10
Watershed No.	BM 43
Category	Safe (As per Groundwater Assessment 2022-23)
Rock Type	Basalt
Aquifer (Water Bearing Zone)	Shallow Aquifer (Jointed / Fractured Basalt)

Location

The site location in village Hinjawadi is located in the Northwest Direction of Pune City at a distance of 15 km. The area under study i.e., said Gat no.236 part & 237 part are located Northwest direction of Village Hinjawadi at around distance of 1.3 km.

Geomorphology- The topography is weathered plateau. A gentle to medium slope is in the east direction.

Geology- The area of village Hinjawadi consists of different layers of Basalt and the thickness varies from 8.00 to 10.00 mt which are formed during the Upper Cretaceous to Lower Eocene period of Geological time scale. The basalt is dark grey to black in color, fine to medium grained and medium jointed and fractured in nature. The geological/lithological data as per field observations in the surveyed area is as below.

Lithology	Brownish coarse-grained soil	0.00 – 1.00 mt
	Highly to moderately weathered basalt	1.00 – 3.00 mt
	Greyish black colored, fine to medium grained jointed fractured vesicular basalt	3.00 – 8.00 mt
	Greyish black colored compact Massive Basalt	Below 8.00 mt

Hydrogeological Conditions – At the surveyed area the soil thickness ranges from 0.00 to 1.50 mt the weathered basalt thickness varies from 1.50 to 3.00 mt, jointed and fractured basalt from 3.00 to 8.00 mt and partly fractured and jointed basalt below 8.00. An entire area of the studied Gat no.236 part & 237 part

is underlain by the basaltic flows of Upper Cretaceous to Lower Eocene. Groundwater in the Deccan Trap occurs mostly in the weathered and fractured, jointed parts till 8.00 mt bgl under unconfined conditions. The water bearing strata at deeper depths exists under semi confined to confined conditions. From the groundwater availability point of view, the area has moderate groundwater yielding potential zone. The availability of groundwater depends largely on surface and subsurface geology, geomorphology, natural drainage pattern, depth of weathering and the fractures present. Actual annual rainfall, groundwater extraction from other sources in the surrounding area is also the factor which controls and affects the availability of groundwater.

Observations - At the time of survey no Borewell or dug well was observed in Gat no.236 part & 237 part

Recommendations -

1. The category of the area as per the groundwater assessment 2022-23 is Safe, the available water should be strictly used for drinking and domestic purposes.
2. The groundwater quality should be analyzed twice in a year (pre and post monsoon) by the applicant from the water testing laboratory at his own cost.
3. 1 Dug well with 7.00mt diameter and 14.00mt depth and 1 Borewell with 60 mt depth to be taken in order to meet the requirement of drinking and domestic purpose per day.
4. To have sustainable groundwater, groundwater recharge from rainwater harvesting to the existing sources should be implanted so that groundwater will be available perennially.
5. The topographical, hydrogeological conditions and rainfall play an important role in fulfilling the requirement of drinking, domestic use. In view of sustainable groundwater for the drinking and domestic purpose the groundwater recharge through surface runoff and rainwater harvesting measures in a quantity equal to the extraction of groundwater from the existing sources is mandatory to the applicant.
6. In view of sufficient water requirements for drinking, domestic and irrigation use, it is strongly recommended that a minimum of 70% of the extracted ground water must be recycled and reused for further usage.
7. The rainwater harvesting structures should be implemented under the technical guidance of this office (GSDA Pune)
8. During the Scarcity period the Scarcity Rule of Maharashtra Groundwater (Development and Management) Act 2009 are mandatory to the applicant.

Surveyed by



Sujata R Sawale

Assistant Geologist



(Diwakar Dhote)

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