47

OIC

Office of Senior Geologist
Groundwater Surveys and Development Agency, GoM
Bhujal Bhavan, K B Joshi Marg, Shivajinagar, Pune 05

Email- sgpune23@gmail.com

97

O.No/SGPune/GSDA/Tech/LGW/840 /2024 Date- 27 AUG 2024

To,
Gurunath Developers,
Through Prashant Magar and others
Manjari Kh,District Pune

wat

Subject- Regarding Hydrogeological Survey at Gat no.1032 of Village Manjari kh, Taluka Haveli, District Pune

Reference- 1. Your Letter dated 26/08/2024
2. Hydrogeological Survey Challan dated 27/08/2024

With reference to the above subject hydrogeological survey was carried out at Gat no.1032 of Village Manjari kh, Taluka Haveli, District Pune.

The details of Proposed site are as follows:

Name Of Village	Manjari kh
Co-Ordinates	18°31'42.7" N and 73°59'43.8" E
Elevation	561 mt
Toposheet & Morpho Unit	47 F/14
Watershed No.	BM 46
Category	Safe (As per Groundwater Assessment 2022-23)
Rock Type	Basalt
Aquifer (Water Bearing Zone)	Shallow Aquifer (Jointed / Fractured Basalt)

Location

The village Manjari kh is located in the East direction of Pune City at a distance of 12.00 km. The area under study i.e., said Gat no.1032 is located East direction of Village Manjari kh at around distance of 0.2 km.

Geomorphology- The topography is a moderately dissected plateau. A gentle to medium slope is in the east direction with second order streams originating and flowing towards east direction towards Mula Mutha river located at a distance of 1.0km.

Geology- The area of village Manjari kh consists of different layers of Basalt and the thickness varies from 2.00 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 -- 6.00 mt
	Greyish black colored, fine to medium grained jointed fractured vesicular basalt	6.00 – 10.00 mt
	Greyish black colored compact Massive Basalt	Below 10.00 mt

Hydrogeological Conditions – At the surveyed area the soil thickness ranges from 0.00 to 1.00 mt the weathered basalt thickness varies from 1.00 to 6.00 mt, jointed and fractured vesicular basalt from 6.00 to 10.00 mt and from 10.00 followed by massive basalt. The entire area of the studied Gat no.1032 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, vesicular parts till 10.00 mt bgl under unconfined conditions. The

7/31/23

water bearing strata at deeper depths exists under semi confined to confined conditions at the depth of about 20-30 mt. 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 2 Bore well was observed in applicant's Gat no.1032. Groundwater which is obtained from the existing bore well can be used for drinking and domestic purposes which is 90,000 lt/day per bore of the Gat no.1032.

Sr. no	Source	Location Sr.no/Gat.no	Dimensions		SWL (summer)	Pump	Water availability
			Depth	Dia			
1	Bore well	Gat no.1032	74 mt	150 mm	30 mt(R)	5 HP	Around 90,000 Lt/day
2	Bore well	Gat no.1032	100 mt	150 mm	30 mt(R)	5 HP	Around 90,000 Lt/day

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. Also, water quality to be maintained hence RO is recommended.
3. To have sustainable groundwater, groundwater recharge from rainwater harvesting to the existing sources should be implanted so that groundwater will be available perennially.
4. 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.
5. 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.
6. The rainwater harvesting structures should be implemented under the technical guidance of this office (GSDA Pune)
7. During the Scarcity period the Scarcity Rule of Maharashtra Groundwater (Development and Management) Act 2009 are mandatory to the applicant.

(Diwakar Dhote)
Senior Geologist
Groundwater Surveys and Development Agency,

Senior Geologist
Ground Water Survey and Development Agency
Pune