

तालुका- भोर (GSDA) प्रमाणपत्र यादी

अ.क्र.	गाव	गट नं.	अर्जदाराचे नाव	प्रमाणपत्र दि.
१.	केळवडे	७६ व इतर	श्री. मकरंद चितळे	०६/०८/२०२४
२.	केळवडे	५६९, ५७०	मे. डेक्कन कोल्ड स्टोरेज तर्फे श्री. मिलिंद देशपांडे व श्री. राजेंद्र येनपुरे	०४/१०/२०२४

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O.No/SGPune/GSDA/Tech/LGW/702/2024

Dated 06/08/2024

To,
Makrand Chitale,
Kelwade, Bhor
District Pune

Subject- Regarding Hydrogeological Survey at Gat no.76,77/1,77/2 of Village Kelwade, Taluka Bhor, District Pune

- Reference- 1. Your Letter dated 01/08/2024
2. Hydrogeological Survey Challan dated 02/08/2024

With reference to the above subject hydrogeological survey was carried out at Gat no. 76,77/1,77/2 of Village Kelwade, Taluka Bhor, District Pune. At the time of hydrogeological survey Shri. Ghorpade the applicant was present.

The details of Proposed site are as follows:

Name Of Village	Kelwade
Co-Ordinates	18°16'12" N and 73°52'39.8" E
Elevation	677 m
Toposheet & Morpho Unit	47 F/15
Watershed No.	BM 57
Category	Safe (As per Groundwater Assessment 2022-23)
Rock Type	Basalt
Aquifer (Water Bearing Zone)	Shallow Aquifer (Jointed / Fractured Basalt)

Location

The village Kelwade is located in the South Direction of Pune City at a distance of 29.00 km. The area under study i.e., said Gat no. 76,77/1,77/2 are located East direction of Village Kelwade at around distance of 1000 mt.

Geomorphology- The topography is undulating to plain plateau. A gentle to medium slope is in the North-to-Northwest direction with second order streams originating and flowing towards west direction. Lineament at a distance of 400 to 500 mt is present to the West direction of the site. There is a major drainage which is flowing in the west direction.

Geology- The area of village Kelwade 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 – 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 1.00 mt the weathered basalt thickness varies from 1.00 to 3.00 mt, jointed and fractured basalt from 3.00 to 8.00 mt and from 8.00 followed by massive basalt. The entire area of the studied 76,77/1,77/2 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 8.00 mt bgl under unconfined conditions. There is a lineament which is towards the Northwest of the Bore well. The 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.

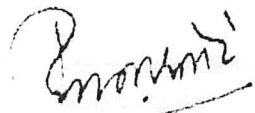
Observations - At the time of survey 2 Bore wells were observed in applicant's Gat number (76,77/1,77/2). The existing borewells are perennial in nature. Groundwater which is obtained from the existing bore well is used for drinking and domestic purposes and can meet the water requirement for a population of around 50 souls which is 1,12,500 lt/day for drinking and domestic demand of the in Gat no 76,77/1,77/2.

Sr. no	Source	Location Sr.no/Gat.no	Dimensions		SWL (summer)	Pump	Water availability
			Depth	Dia			
1	Bore well	Gat no 76,77/1,77/2	90 mt	150 mm	30 mt(R)	5 HP	Around 1,12,500 Lt/day
1	Bore well	Gat no. 76,77/1,77/2	90 mt	150 mm	20 mt(R)		

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 RC 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 mandated 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.

Surveyed by

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 (Diwakar Dhote)
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 Pune