Office of the Senior Geologist
Groundwater Gats and Development Agency, GoM.
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No. SG/GSDA/Pune/Tech/LGW/105/2026 **Date-** 04/02/2026
04 FEB 2026

To,

Ms Kalyani Fortune Properties
Through its partner
Shri Kishorekumar B Jain and
Shri Nilesh S Agarwal
Pirangut.
Mulshi. Dist Pune

Sub: Regarding Hydrogeological Gat at gat no.148/1,149,150,151,152 and 254 part of Village Pirangut, Tal. Mulshi. Dist. Pune.

Ref: Your application dated 02/02/2026

With reference to the above subject hydro-geological survey gat was carried out in the presence of concern personnels at gat no.148/1,149,150,151,152 and 254 part of area 26040.33 sqm Village Pirangut Tal. Mulshi. Dist. Pune. At the time of Hydrogeological survey in proposed gat, the personnel Shri. Dipak More was present.

The details of the proposed site are as below.

Name of Village	**Pirangut, Tal. Mulshi. Dist. Pune**
Co-ordinates	Lat - 18.507583° N, ; Long - 73.700842° E
Elevation (msl)	579 m
Toposheet& Quadrant No	47F/10 and 3C
Watershed No.	BM-45 ; 4/10
Morphozone	A; Ab
Category	Safe (As per Groundwater Assessment 2022-23)
Rock Type	Basalt
Aquifer (Water bearing Zone)	Shallow Aquifer (Jointed and Fractured Basalt)

Location:

Village Pirangut, Tal. Mulshi. Dist. Pune is located a suburben along the western Metropolitan corridor of Pune The area under study i.e said gat no. 148/1,149,150,151,152 and 254 part is located towards east of gaothan.

Geomorphology:

The village area has undulating topography with gentle slope towards NN-West. The drainage of Pirangut, Tal. Mulshi. Dist. Pune village shows dendritic drainage pattern. River Mula flows in west- east direction towards North of village at approx. 3 kms.

Geology:

The area of village Pirangut, Tal. Mulshi. Dist. Pune consists of solidified layers of basalt and thickness of each layer varies from 10.00 to 15.00 meters and formed during upper Cretaceous to lower Eocene period of Geological time scale. The basalts are dark grey to black in colour, fine to medium grained, medium jointed and fractured in nature. For the proposed area the geological as well as lithological data is considered as per field observations and reported data.

Lithology	Greyish to brownish coarse grained soil	0.00 –0.50 m
	Highly to moderately weathered Basalt.	0.50 – 3.00 m
	Greyish black coloured, fine to medium grained, jointed and fractured Basalt.	3.00 – 7.00 m
	Greyish black coloured partly jointed and fractured Massive Basalt	7.00 – 15.00 m
	Greyish black coloured compact Massive Basalt	Below 15.00 m.

Rainfall:- Village Pirangut, Tal.Mulshi. Dist. Pune receives rain from south-west Monsoon and retreating of monsoon. On an average moderate to high rainfall. The average mean annual rainfall in the district is 1573 mm. The distribution of rainfall is very uneven. About 85 percentage of the annual rainfall is received during the south-west monsoon season.

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Hydrogeological Conditions:

At the proposed area the Soil thickness is upto 0 to 0.5 m, the weathered basalt thickness ranges 0.5 – 3.0 m, jointed and fractured basalt ranges 3.00 – 7.00 m., Greyish black coloured partly jointed and fractured massive basalt ranges 7.00

– 15.00 m and below 15.00 m the Greyish black coloured compact massive basalt. The entire area of the studied gat no. 148/1,149,150,151,152 and 254 part is underlained by the basaltic lava flows of upper Cretaceous to lower Eocene age. Geologically the area is covered by jointed and fractured basalt.

Ground water in Deccan trap basalt occurs mostly in the upper weathered and fractured parts down to 1.00 - 12.00 m bgl under unconfined conditions. The water bearing strata at deeper depth exists under semi confined to confined conditions at a depth of about 30-45 m and 50-55 m. From the groundwater availability point of view, the area is moderate yielding groundwater potential zone.

The availability of groundwater as a source depends largely upon surface and subsurface geology, geomorphology, natural drainage pattern, depth of weathering and fractures present. Actual annual rainfall, groundwater extraction from other sources in the surrounding area, urbanization, topography modification are also the factors which control and affect the availability of groundwater.

The said gat no. 148/1,149,150,151,152 and 254 part has an area of approx. 26040.33 sqm and 8 groundwater sources are present and currently the ground water sources used for domestic and drinking purposes.The details of existing groundwater sources are as given below.

Sr. No	Source	Location Gat No.	Details of GW Source				Lifting Device	GW Yield
			Dimensions /Diameter in m	Depth in m	Water Level in m.			
					Winter	Summer		
1	BW-1	148/1,149,150,151, 152 and 254 part in Pirangut	150mm	30m(R)	5.00m (R)	10.00m (R)	2hp	2.5 inch
2	BW-2		150mm	46m(R)	5.00m (R)	10.00m (R)	-	1.5 inch
3	BW-3		150mm	60m(R)	5.00m (R)	10.00m (R)	2hp	1.5 inch
4	BW-4		150mm	30m(R)	5.00m (R)	10.00m (R)	-	1.5 inch
5	BW-5		150mm	60m(R)	5.00m (R)	10.00m (R)	-	1.5 inch
6	BW-6		150mm	60m(R)	5.00m (R)	10.00m (R)	-	1.5 inch

7	BW-7		150mm	60m(R)	5.00m (R)	10.00m (R)	-	1.5 inch
8	BW-8		150mm	60m(R)	5.00m (R)	10.00m (R)	2hp	2.5 inch

Observations: Based on Hydrogeological gat done by this office, it has been observed that 8 groundwater sources (BW) are present in Gat no 148/1,149,150,151,152 and 254 part of Pirangut, Tal Mulshi. From the groundwater availability point of view, on basis of ground water potential maps the area is classified as moderate yielding potential zone. By considering the existing sources and the sources in the adjoining area, presently approx.500-600cum/day water may be available from the existing sources seasonally.

Nevertheless, deficit in normal rainfall, increase in population density, excess groundwater extraction from surrounding areas and lack of groundwater recharge may create stress on the availability of groundwater. Following measures are recommended and are mandatory to the applicant.

Recommendations:

1. The area is being used to construct residential properties at Gat No. 148/1,149,150,151,152 and 254 part Village Pirangut, Tal Mulshi.
2. At the time of any development process the applicant /company /every holder of a said land shall take all possible precautions to avoid the disturbance of the natural drainage system and aquifer system available.
3. The available groundwater should be strictly used for drinking and domestic purpose only. For future development of infrastructure, the requirement of water should be fulfilled by tanker water/untreated raw water so that extraction/utilization of groundwater is controlled.
4. If in future the additional water required for the drinking and domestic purpose, the water requirement should be fulfilled by the water supply connections of local authority and is mandatory to the applicant.
5. For the sustainable availability of groundwater, Roof Top Rainwater Harvesting measures to the existing/new groundwater sources is mandatory.
6. The rainwater harvesting structures should be implemented under the technical guidance of this office (G.S.D.A. Pune) and checked it from time to time.
7. The water quality of existing source should be analyzed regularly by the applicant/firm on its own cost from the water quality laboratory. For drinking purpose treated water should be used.

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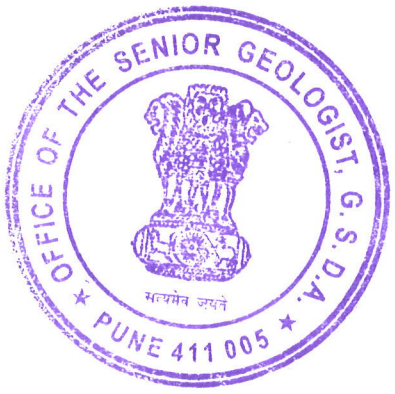
8. The topographical, hydro-geological conditions and rainfall play very important role for fulfilling the requirement of drinking and domestic water. In view of sustainable groundwater for the drinking and domestic use, the groundwater recharge through rainwater harvesting measures in a quantity equal to the extraction of groundwater from the existing sources is mandatory to the applicant.
9. In view of water requirement for the drinking and domestic use, it is strongly recommended that minimum 70 % of the extracted groundwater must be recycled and reused for further usage.
10. During the Scarcity period the rules of Maharashtra Groundwater (Development and Management) Act 2009 are mandatory to the applicant.



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