

Report No. 58 / TFO-U (Dis)-Rehabilitation/2013-14

**RECONNAISSANCE GEOLOGICAL REPORT OF PROPOSED SITE OF SHRI SHIVANAND
S/O SHRI HARI SARAN FOR THE CONSTRUCTION OF PRE-FABRICATED HOUSE
TOK THATI VILLAGE MANDON, TEHSIL- BHATWARI- DISTRICT UTTARKASHI,
UTTARAKHAND**

KHASARA NO - 1373 AREA - 0.006 ha.

DATE OF INSPECTION- 09/12/2013 & 12/12/2013

The inspection of the site was carried out as per speaking order of District Magistrate. It was carried out in the presence and co-operation of Ranbir Singh Panwar Revenue Sub-Inspector. Shri Vijai Kr. Sen, Consultant Geologist and Shri Shashank Sharma, Consultant Associate Geologist assisted in collection of required field data.

The proposed site falls in Village Mandon, Tehsil- Bhatwari, 3 Km approx from District Headquarter Uttarkashi, Uttarakhand and on coordinate - N 30° 44.169' E 78° 27.381' elevation 3796 feet. The approach to the site is through bridle path on the left bank of river Bhagirathi and is about 100 m approx. distance from the river bank and the vertical height w.r.t. river is 20 m. The direction of river w.r.t. the hill outcrop is N 285°. The area is moderately populated. The Badethi-Thekhala Bypass road is passing just above the proposed site from about 40 feet elevation. On western downhill side there are houses and agricultural land.

The terrace is old alluvium deposit. A small escarpment on eastern side is present. At the site there is exposure of in-situ rock massive quartzite with phyllite inter-bedded at the back side. The outcrop is weathered, highly jointed with a joint spacing of about 2-5 cm and fracture up to 10 cm. The detailed structural component of the in-situ rock is as follows:

Dip Dir. of the In-situ rock- N 50° E

Dip amount of In-situ rock- 23°

There were 4 prominent joint sets with orientation direction as N 50° E, N 45° W, N 60° W and a random joint set. The rocks are highly fractured and disturb. The proposed site is on river born material (RBM) with unstable in-situ rock exposure at the back side. The area shows little vegetation cover, flat land and no soil cover as the proposed site on concrete base.

RECOMENDATIONS

1. A inclined stepped retaining wall with provisions of weep holes with appropriate distances, should be constructed on the western down part and wall at least in 07m area is required where in-situ rocks area exposed for the safety of the house. The retaining wall in western downhill side must be strengthened.
2. A RCC and CC structure in atleast 5 m area where the in-situ rock is exposed and also
3. The loose fractured fragments of phyllitic rocks should be removed for ensuring the sound stability of pre-fab hut, as motor road is passing just above the site.

CONCLUSION

Prima-facie, the proposed site of Shri. Shivanand S/o Shri. Hari Sharan is geologically suitable for construction of prefabricated house with the implementation of above mentioned recommendations.

Date: 13/12/2013

Place: Camp Ladari, Uttarkashi

gk
13/12/13
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