

RECONNAISSANCE GEOLOGICAL REPORT OF PROPOSED SITE OF SHRI JOT SINGH S/o SHRI NAIN SINGH FOR THE CONSTRUCTION OF OWNER DRIVEN CONSTRUCTION FOR HOUSING (ODCH) TOK MORA, VILLAGE ODATA, TEHSIL- MORI- DISTRICT UTTARKASHI, UTTARAKHAND
KHASARA No. – 1048 & AREA – 0.020 ha.

Date of Inspection: 23/01/14

In a 'World Bank' funded programme, Government of Uttarakhand has provided teams of Consultant Geologists and Consultant Associate Geologists to Director, Geology and Mining Unit, Uttarakhand for geological studies in proposed sites for Owner Driven Construction For Housing (ODCH) in disaster affected districts of Uttarakhand.

Director, Geology and Mining Unit, Directorate of Industries, Uttarakhand has issued an Office Order No.1612 Aa. Pra./Bhu.Ni./Bhu.Khani.E./2013-14 dated 10thDecember 2013 regarding geological studies in disaster affected five districts of Uttarakhand, Uttarkashi is one of them. Thus, undersigned have taken geological observation during traverses and collected field geological data under the management of cosignatory departmental 'Assistant Geologist'.

In the above mentioned questioned area, the reconnaissance geological investigation was carried out in the presence and co-operation of Shri Jaypal Singh, Homeguard. It is 5Km approx from Tehsil Headquarter Mori, Uttarkashi, Uttarakhand and the site is 1Km approx from Tyuni-Purola-Naogaon Road No. 17 through Odata-Bamsu-Saransh bridge path. It falls on coordinate – N 30° 59' 16.7" E 78° 00' 06.4" El. 1130m. The site is in right bank of Tons river flowing towards NE to SW direction at about 300-350m distance and at 150-200m vertical height in Mora Tok of village Odata, which is moderately populated. At the proposed site a new construction is already present. Mora irrigation canal is passing from the eastern boundary of the proposed site flowing in NW to SE direction.

The proposed site is on mix colluvial and river born overburden material varying in thickness range from 15-20m, man-made cultivated terraces are present. The site is 200m approx from Mora Khadd flowing in SE direction. The uphill slope is 10°-12° upto 150m in uphill side then the slope gradient changes to 60°-65° as the hill slopes with dense forest starts and the downhill slope is 3°-5° sloping in SE direction. Around the proposed site location dense mix vegetation is present at about 150m approx in uphill side and in downhill side cultivated terraces are present with least vegetation.



Uphill side view of the proposed site


The proposed site is on mix colluvial and alluvial overburden material thus no insitu rock is found but a few boulders varying in size range from 20cm to 1m approx are found embedded in the brownish sandy soil with quartz fragments. The soil is consolidated; the rate of infiltration is medium due to the surface water and also due to the nearby passing Mora canal making the soil moist. At and around the proposed site location the water seepage is low. In the toe in SE direction boundary temporary retaining wall is also present.

RECOMMENDATIONS:

1. Inclined retaining wall of 3m approx at the NW backside boundary and in south-eastern toe boundary of the site with depth of foundation of the backside retaining more than that of the foundation depth of the house, with provisions of weep holes and sufficient gap of about 2-3feet in between the backside retaining wall and the proposed construction should be constructed. And also, proper drainage system between the retaining wall and the wall of house should be developed.
2. The surface drainage should be properly planned through lined drain/pipe, so both rain water as well as waste water from the existing houses to be release safe place in SE direction along a channel.
3. The Mora canal which is passing next to the eastern boundary of the proposed site should be maintained regularly in order to avoid seepage of water from it and also a 2-2.5m cemented retaining wall should be given in SE boundary of the site.
4. The foundation depth of the houses must be as per the compactness of the overburden material at the proposed site.
5. Framed structure with deep column and light roof must be constructed as the area falls in the earthquake zone IV, so it is essential that the house must be constructed with latest earthquake resistive techniques.
6. Massive plantation of trees, bushes and grasses which can hold the soil mass and retain the debris with dense and long rooted, wide leafed flora must be done to protect the soil erosion and minimize the surface erosion of sub-surface rock.
7. The soak pits and toilet foundations must be quiet away from the house so that the foundations are not directly affected from subsidence due to excessive seepage.
8. The premises of house must be made 'pukka' in order to avoid excessive seepage of the surface water.


CONCLUSION:


Prima-facie, presently, the proposed site of Shri Jot Singh S/o Shri Nain Singh is geologically feasible for the proposed construction, only if, the above mentioned recommendations will be followed strictly, otherwise, in their contravention; geologically suitability will be deemed annulled.


(Shashank Sharma)

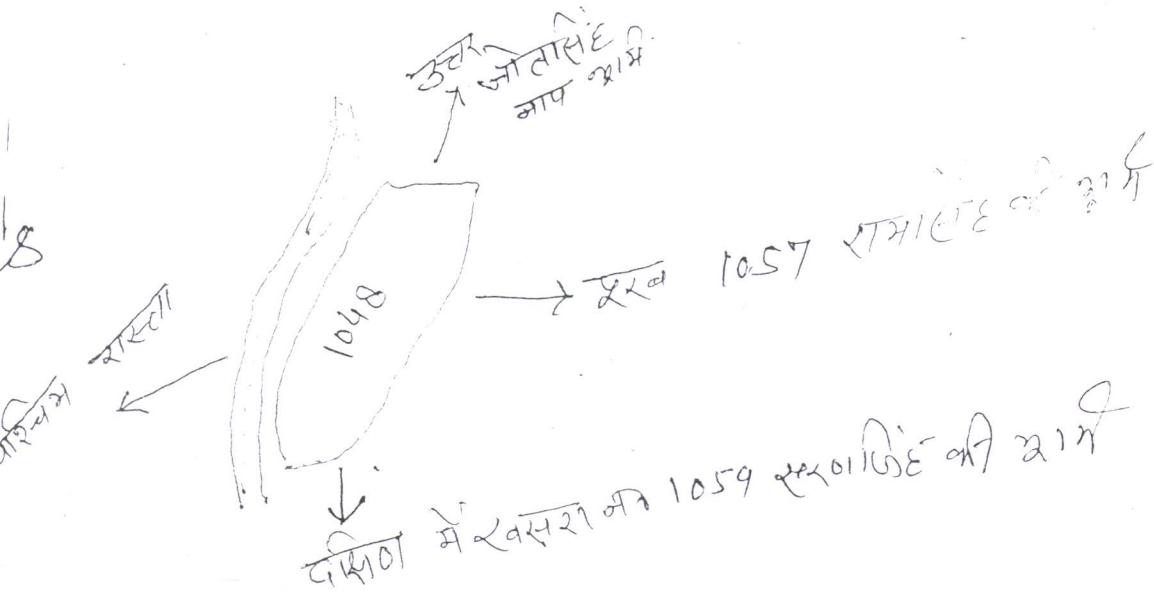
Consultant Associate Geologist

Place: Camp Uttarkashi


(Deepak Singh)
Consultant Geologist


(Dipender Singh Chand)
Assistant Geologist
Mob: 8192802331
Email id: agddn-dgm-uk@nic.in

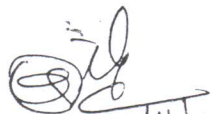
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 पर वनाभे जाने वाले पञ्चायति व्यक्ति जोतासिंह सा. न. सा. सिंह
 के भवन का नजरी नम्बर 1048 क्षेत्र 0020 है

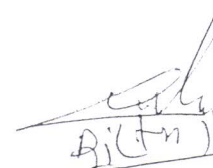


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- 1) पश्चिम : रास्ता ग्राम
- 2) पूरव : रामासिंह की वन्देवाली ग्राम
- 3) दक्षिण : खसरासिंह की वन्देवाली ग्राम
- 4) उत्तर : जोतासिंह की वन्देवाली ग्राम


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