

RECONNAISSANCE GEOLOGICAL REPORT OF PROPOSED SITE OF SHRI ISHWAR SINGH S/o SHRI NAIDAR SINGH FOR THE CONSTRUCTION OF OWNER DRIVEN CONSTRUCTION FOR HOUSING (ODCH) TOK MORA, VILLAGE ODATA, TEHSIL- MORI- DISTRICT UTTARKASHI, UTTARAKHAND
KHASARA No. – 229 & AREA – 0.015 ha.

Date of Inspection: 25/01/14

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 23Km approx from Tehsil Headquarter Mori, Uttarkashi, Uttarakhand and the site is 15Km approx from Tyuni-Purola-Naogaon Road No. 17 through Odata-Bamsu-Saransh bridge path. It falls on coordinate – N 31^o 01 56.2 E 77^o 57 56.6 El. 2230m. The site is in Seeri Tok of village Saransh, which is less populated. Chada Khadd is passing from 150m approx flowing in west to east direction.

The proposed site is on mix colluvial overburden material varying in thickness range from 15-20m approx at places, man-made cultivated terraces are present. The uphill slope is 25^o-30^o upto 60-65m in uphill side then the slope gradient changes to 60^o-65^o as the hill slopes with dense forest starts and the downhill slope is 40^o-45^o sloping in SE direction. Around the proposed site location dense mix vegetation is present at about 60-65m approx in uphill side and around the site least vegetation is present.



Close view of the proposed site

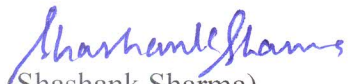
The proposed site is on colluvial overburden material thus no insitu rock is found but a few boulders varying in size range from 20cm to 50cm approx are found embedded in the brownish silty clay soil with phyllite fragments. The soil is consolidated; the rate of infiltration is medium to high making the soil water saturation medium to high from northern plot boundary to southern plot boundary respectively. At the proposed site location the water seepage is low.


RECOMMENDATIONS:

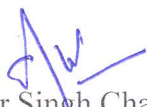
1. Inclined retaining wall of 3m approx at the eastern backside boundary and in the western toe boundary of the site with depth of foundation of the backside retaining more than that of the foundation depth of the house, with provisions of weep holes and sufficient gap of about 2-3feet in between the 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 in southern side 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 foundation depth of the houses must be as per the compactness of the overburden material at the proposed site.
4. 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.
5. 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 in the eastern downhill side and southern side boundary to protect the soil erosion and minimize the surface erosion of sub-surface rock.
6. The soak pits and toilet foundations must be quiet away in north-eastern side from the house so that the foundations are not directly affected from subsidence due to excessive seepage.
7. 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 Ishwar Singh S/o Shri Naidar 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.

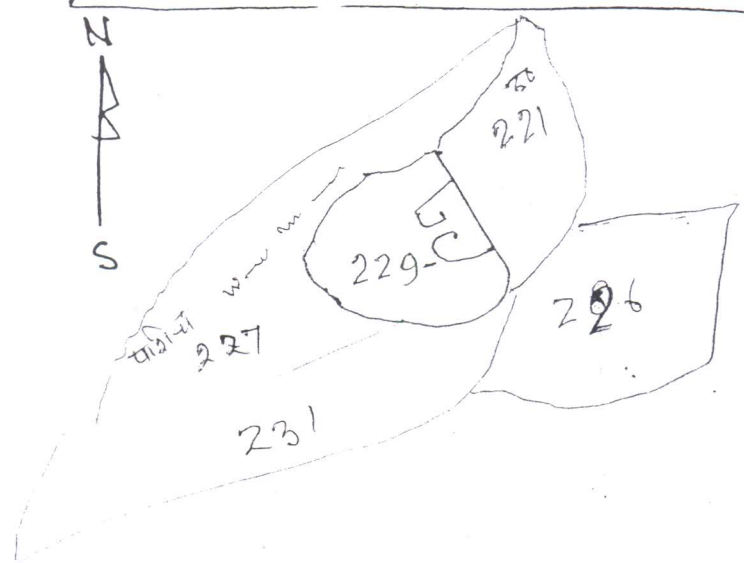

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तहसील मोरी के ग्राम सुराश में हैं। आपदा के कारण
 प्रणालिप से क्षतिग्रस्त भवन के कारण प. निजी भूमि
 पर बनाए गये वाले प्रभावित व्यक्ति इब्राहिमसिंह 510 मैदरसिंह
 के भवन का नजरी तफशा व खसरा 229 क्षेत्र 0.015 है।



खसरा नं०	कुल क्षेत्र फ०	प्रस्तावित क्षेत्र फ०
229	0.015	0.015

- नोट :-
- 1 पश्चिम :- सरदारसिंह का नाप खेत/खसरा नं० 226
 - 2 ख. :- उत्तरा खसरा नं० 227
 - 3 दक्षिण :- खसरा नं० 231 पदमसिंह नाप खेत
 - 4 उत्तर :- खसरा नं० 221 कुन्दासिंह का नाप खेत

(Signature)
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