

RECONNAISSANCE GEOLOGICAL REPORT OF SHRI SUNDER SINGH S/o SHRI KAUR FOR THE PROPOSED CONSTRUCTION OF OWNER DRIVEN CONSTRUCTION HOUSING (ODCH) VILLAGE-BARSHU, TEHSIL- BHATWARI,DIST.- UTTARKASHI KHASRA No.-1683 & AREA-0.015 ha.

Date of Inspection: 22-12-2013

In a 'World Bank' funded programme, Government of Uttarakhand has teams for geological studies in sites proposed for Owner Driven Construction House (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 traversed and collected field geological observations 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 Dashrath Singh Nath, Revenue Sub-Inspector Barshu.The proposed construction site is located 47km away from district headquarter Uttarkashi, 300m by on foot from Bhatwari-Barshu motor road. The area is dense populated and proposed site is low vegetated. That proposed site falls on the coordinates N 30^o50'43.8" E 78^o36'11.4" and El. 2241m from msl.

The proposed site situated on coluvial terrace and manmade flat cultivated land. At 500m horizontal distance in the south-east direction on the right bank of Swari Gad.In coluvial terrace about 1.5-2m thickness of overburden, in overburden Gneiss and quartzite fragments varying size from 1-5cmwith fine grain brownish soil matrix. The proposed site is cultivated and low vegetated. General slope of the proposed site is 10^o-15^o, uphill slope from proposed site is trending20^o-25^o and downhill slope is trending25^o-30^o towards east direction. In toe of the Barshu village towards Swari gad side is continue erosion on rainy session that is landslide formed in the right bank of the river. Due to landslide in river bank that cause is subsidence seen around proposed site. But the proposed site is 100-120m distance from subsidence zone and toe of the hill. Presently the site is suitable for house construction.



The close view of the proposed site

RECOMMENDATIONS:

Based on above surface geological observations of the proposed area, geologically suitable for building construction and the following remedial measures are recommended:

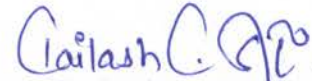
1. The surface drainage should be properly planned through lined drain/pipe, so both, rain water from uphill side as well as waste water from the existing houses to be release safe place at down-hill along a channel with more dimensions than that of maximum possible volume of water.
2. The foundation depth of the houses must be as per the compactness of the overburden material in the proposed site.
3. 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.
4. Framed structure with 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. 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.

CONCLUSION:

Prima-facie, presently, the proposed site of Shri.Sunder SinghS/o Shri. Kaur Singhis 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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