

RECONNAISSANCE GEOLOGICALREPORT OF SHRI SARDARSINGH S/O SHRI BHARAT SINGH FOR THE PROPOSED CONSTRUCTION OF OWNER DRIVEN CONSTRUCTION HOUSING (ODCH) TOK-NATIN, VILLAGE-KUJJAN, TEHSIL- BHATWARI, DIST.- UTTARKASHI KHASRA NO.-1344&AREA-0.008 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 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 Dasrath Singh Nath, Revenue Sub-Inspector Barshu. The proposed construction site is located 56km away from district headquarter Uttarkashi, 2km by foot away from Kujjan motor road,6km away from Gangotri national highway. It falls on coordinate – N 30^o51'25.6" E 78^o37'4.3" and El. 2236m from msl.

The proposed site situated on the overburden which is manmade flat hill terrace by old debris material. At 150m horizontal distance in the north-east direction on the right bank of Kujjangad, about 1.5-2m approximate thickness of overburden, in overburden quartzite and gneiss fragments 1-5cm and boulders is varying 1-2msizewith fine grain brownish clayey soil matrix. Bedrock has not been found surrounding of the proposed site. The proposed site is cultivated and low vegetated.



A view of propose site and downhill slope of the site

General slope of the proposed site is 10° - 15° , about 30m hill side from proposed siteslope trending 20° - 25° westward. In valley side slope is steep to vertical cliff in north-east direction towards Kujjan Gad from proposed site.

The proposed site is on debris conedeposit on the north-eastern sloping hill on the right bank of Kujjan Gad .The angular and sub-angular mixed fragment and boulders of quartziteand gneissvarying 1-10cm and 1-2m respectively withbrownish fine grain clayey soil matrix made up of proposed land. About 30 to 40m height vertical cliff is present 80-100mvalley sidefrom the proposed site


RECOMMENDATIONS:


Based on above surface geological observations, the proposed area seems geologically suitable for the proposed building construction. The following remedial measures are recommended for safety:

1. The foundation depth of the house must be as per the compactness of the overburden material in the proposed site.
2. The backside retaining must be provided with screening material to keep the weep-holes passage clear for discharge of subsurface water to maintain stability of foundation of the house.
3. A minimum distance of 3-4ft should be kept between the backside inclined retaining and the back wall of the house to avoid seepage into the house.
4. As the area falls in Lesser Himalayan earthquake zone IV, light weight roof, deep column, framed structure, and single or double storied house construction is preferable.

CONCLUSION:


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


(Vivek Sahu)
Consultant Associate
Geologist


(Kailash Chandra Sati)
Consultant Geologist

Date:

Place: Uttarkashi


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

