

RECONNAISSANCE GEOLOGICAL REPORT OF PROPOSED SITE OF SMT. SUNDRI DEVI W/O SHRI KRIPALU FOR THE CONSTRUCTION OF OWNER DRIVEN CONSTRUCTION FOR HOUSING (ODCH) VILLAGE-KHALADI, TEHSIL- PUROLA DISTRICT- UTTARKASHI KHASARA NO -2034 & AREA -0.011 ha

Date of Inspection: 29/12/13

In a 'World Bank' funded programme, Government of Uttarakhand has provided teams of Consultant Geologists and Consultant Associate Geologist to Director, Geology and Mining Unit, Uttarakhand for geological studies in proposed site 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 10th December 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 B. S. Chauhan, Revenue Sub-Inspector, Khaladi. The proposed site is 8Km approx from Tehsil Headquarter Purola, District Uttarkashi, Uttarakhand and 150m hill side from Purola-Khaladi motor road. It falls on coordinate – N 30° 51' 10.8" E 78° 4' 13" El. 1718m. At 50m horizontal distance Ghuttu Gad in S direction is present from the proposed site.

The site is located on colluvial deposit and man-made cultivated step terraces are present. The thickness of overburden is varying at places in between 1-1.5m approx with boulders embedded in the soil. The boulders of phyllite and dolomite are present on top of hill ridge, two side slopes are 20°-25° towards SE direction and 25° -30° towards NW direction. The site is covered with very thin soil cover of 2-5cm approx. At around the area less vegetation and moderate population is present.

In-situ rocks phyllite with quartz vein are exposed about 30-40m approx on the foot way. The orientation of the bed is as- Dip amount 40° dipping towards S 30° W direction. The rocks are moderately jointed and weathered; orientation of the joints is as- J1 –Dip amount 85° dipping in S 30° W, J2 dip amount 62° dipping in S 60° E direction.



Close view of the proposed site

At the proposed site, thin and consolidated soil cover with rock fragments of phyllite varying in size from 5-10cm, with fined grained light brownish soil matrix.

RECOMMENDATIONS:

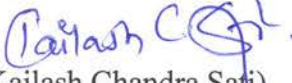
Based on above surface geological observations, the proposed area seems geologically suitable for the proposed building construction. The following remedial measures are recommended for safety:

1. Construction of inclined retaining walls, having deep foundation and provisions of sufficient weep holes, on both south-east and north-west sides of the base of site is strongly suggested.
2. The surface drainage should be properly planned through lined drain/pipe, so both, rainwater from uphill side as well as waste water from the existing houses to be release safe place at both down-hills along a proper channel with more dimensions than that of maximum possible volume of water.
3. The foundation depth of the houses must be as per the compactness of the overburden material in the proposed site.
4. Massive plantation of trees, bushes and grasses which can hold the soil mass and retained the debris with dense and long rooted, wide/broad leafed flora must be done to protect the soil erosion and minimize the surface erosion of the subsurface rocks.
5. The soakpits and toilet foundations must be quiet away from the house so that the foundations are not directly affected from subsidence due to excessive seepage.
6. The premises of house must be made 'pukka' to prevent excessive sub-surface seepage and downward percolation of water and differential settlement.
7. Framed structure must be used and light roof should 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, scientific and technically sound craftsmanship with logical and favourable principles of soil mechanics.

CONCLUSION:


Prima-facie, presently, the proposed site of Smt. Sundri Devi w/o Shri Kripalu is geologically feasible for the proposed construction, only if, the above mentioned recommendations will be followed strictly, otherwise, in their contravention; geological suitability will be deemed annulled.

(Vivek Sahu) 
Consultant Associate Geologist


(Kailash Chandra Sati)
Consultant Geologist

Date:

Place: Uttarkashi


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नवखा गाँव खलड़ी पट्टी कमलाहराई तहसील पुरोला

पिम्पाना 64" = 1 मीटर

इस श्रद्धा का जहाँ श्रद्धा मिलाने के निमित्त करना चाहती है प्राप्ति - प्रमाणित सुन्दर होना चाहिए साप-खलड़ी



चौहकी प्रमाण :-

- 1- पूरव में - खेत नं 2024 अणाल शर्मा
- 2- पश्चिम में - खेत नं 2022 उचर
- 3- उत्तर में - रास्ता
- 4- दक्षिण में - खेत नं 2021 उचर

प्रमाणित श्रद्धा
मिलाने श्रद्धा
रास्ता
वन्दर श्रद्धा

2028

2024

जायार कर्ता
20.11.13
साप-खलड़ी

खलड़ा गाँव खलड़ी पट्टी कमलाहराई तहसील पुरोला उचर

| खलड़ा नम्बर | खता | खलड़ा | नाम/श्रद्धा | प्रमाणित खलड़ा नम्बर | प्रमाणित खता | खलड़ा | प्रमाणित खलड़ा नम्बर का नाम/पता/पुरा का नाम |
|-------------|------|-------|-----------------------|----------------------|--------------|-------|---|
| 2028 | 0099 | र | कमलाहराई शर्मा व नवखा | 2028 | 0099 | र | प्रमाणित सुन्दर होना चाहिए साप-खलड़ी तहसील पुरोला |

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