

**RECONNAISSANCE GEOLOGICAL REPORT OF PROPOSED SITE OF
SMT. KAUSHALYA DEVI W/O LATE HARI PRASAD FOR THE CONSTRUCTION
OF OWNER DRIVEN CONSTRUCTION FOR HOUSING (ODCH)
VILLAGE- GODSARA, TEHSIL- DUNDA, DISTRICT UTTARKASHI,
UTTARAKHAND**

Date of Inspection: 27-01-2014

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 10th December 2013 regarding geological studies in disaster affected five districts of Uttarakhand. District Uttarkashi is one of them where the undersigned took traverses and collected field geological observations under the management of cosignatory departmental 'Assistant Geologist'.

The proposed site for construction is 45km approximately from Uttarkashi Headquarter, Uttarakhand from Lamgaon Motor marg and is about 300m on foot by bridle path from the road. It falls on coordinate – N 30°04'05.2" E 78°07'31.3" and elevation-1338m. The proposed site is less populated.

The proposed site is on man-made cultivated terrace which is about 2.5m vertically from the Srikalkhal Marg. The site is covered with colluvial overburden material of about 2-3.5m and is composed of reddish brown silty soil with fragments of quartzite of approximately 1cm to 5cm size. The uphill slope at the proposed site is 28°-30° towards Westward direction and the downhill slope is approximately 24°-26° in West direction.



Close view of the site.



Far view of the construction site.

The site is on the left bank of Jarkool River which is approximately 400-450m horizontally and 150-200m vertically from the construction site. The Jarkool River is flowing

from North to South direction. In the NE direction approximately 50m from the site there is a seasonal 'Kimi Gadera' flowing from NE to SW direction and another seasonal nala called 'Semlakhal Nala' about 150m from the site in South direction which is flowing from SE to NW direction. At and around the proposed site location the water seepage is light. There are many houses already present in the nearby area. The vegetation is moderate in the area.

1. RECOMMENDATIONS:

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

1. Inclined retaining wall of 3m at the backside SE boundary and at toe NW boundary of the plot along the road 2.5m retaining wall with provisions of weep holes must be constructed to enhance the stability of the plot.
2. A sufficient gap of about 2feet in between the backside retaining wall and the backside wall of the proposed construction should be kept.
3. A proper drainage system with discharge towards Northward direction must be developed at the site.
4. The foundation depth of the houses must be as per the compactness of the overburden material in the proposed site.
5. The back, sides and the premises must be made cemented in order to avoid excessive seepage of the surface water during monsoon.
6. Framed structure with light roof, deep column and single storied house construction is preferable as the area falls in the earthquake zone IV.

2. CONCLUSION:

Prima-facie, presently the proposed site of Smt. Kaushalya Devi W/o Late Hari Prasad is geologically feasible for the proposed construction, only if, the above mentioned recommendations will be followed strictly, otherwise, in its contravention; geologically suitability will be deemed voided.



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