

**RECONNAISSANCE GEOLOGICAL REPORT OF PROPOSED SITE OF
SHRI RAM LAL, MADAN LAL S/O SHRI HAZRU FOR THE CONSTRUCTION OF
OWNER DRIVEN CONSTRUCTION FOR HOUSING (ODCH)
VILLAGE-MANDIYASARI, TEHSIL- DUNDA, DIST.- UTTARKASHI
KHASARA NO – 1262 & AREA – 0.021ha**

Date of Inspection: 29-12-2013

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'.

In the above mentioned questioned area, the reconnaissance geological investigation was carried out in the presence and co-operation of Shri Ram Singh Negi, Revenue Sub-Inspector, Geonla, Brahmkhal. The site is 30km approximately from Tehsil Dunda, District Uttarkashi, Uttarakhand by NH-108 (National Dharasu-Gangotri Highway) via NH-94 (National Dharasu-Yamunotri Highway) and 200-250m on bridle path from road. It falls on coordinates – N 30°41.793' E 78°18.276' and elevation 1351m. The site is less populated.



A side view from NE direction of the proposed site.



A far view from SW direction of the proposed site.

The proposed site is situated on a hill slope terrace in Village Geonla. The overburden thickness in the proposed site is about 15-20m approximately. There are fragments of phyllite in the overburden material of approximately 5-10cm in size. The soil is brown color with silty material. The uphill slope from the site is 20° towards NW direction and after 30m the slope

increases 40°-45° towards NW direction. The downhill slope is steep of 65°-70° towards NW direction. There is perennial 'Patnoli Gaad' about 600m in NE direction of the site and there is a small seasonal Nala about 40m from the site in NE direction. The site is less vegetated.

There is an outcrop of phyllite (5x5m) about 50m from the site in West direction. The foliation plane is dipping 45° toward N45° and strike N 135°. The foliation spacing is 2-3cm, continuity is >5m and opening is 1-2mm. The joint plane J1 is dipping 85° towards N100° with strike N190° and the joint spacing is 5-10cm and continuity is >3m with 2-5mm openings. It is grey colored, fine grained and thinly foliated. The rocks are moderately weathered in nature.


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. An inclined retaining wall of 4-5m on both NW side and SE side of the proposed site must be constructed with proper weep holes at specific distance for enhanced stability of the plot.
2. The weep-holes passage should be clear to discharge subsurface water to maintain stability of foundation of the house.
3. The depth of foundation of the house should be as per the compactness of the overburden material.
4. The back, sides and premises of the houses must be made cemented to prevent subsurface seepage and a proper drainage system with drain discharge towards North direction needs to be developed.
5. As the area falls in Lesser Himalayan earthquake zone IV, light weight and slanting roof, framed structure, deep column and single storied house construction is preferable.

CONCLUSION:

Prima-facie, the proposed site of Shri Ram Lal, Madan Lal S/o Shri Hazru, is geologically feasible for the proposed construction, with the strict implementation of the above mentioned recommendations, otherwise, in their contravention; geological suitability will be deemed voided.

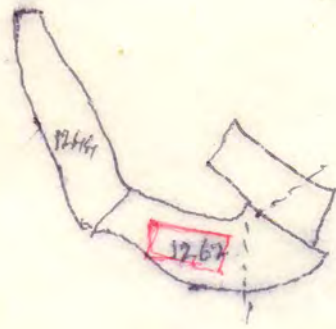

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वेस्ट नकशा ग्राम मंडिभासारी पही अणवस्त्र तहसील डुडा 27
जिल्हा - अहमदाबाद



नाम रकम
अवन विभागाचे तहसीलदार

सहायक
28/12/13
रा. उपाय व सेवा

वेस्ट नकशा ग्राम मंडिभासारी पही अणवस्त्र तहसील डुडा जिल्हा अहमदाबाद R. S. No - 27

खसरा नं०	रकम	खाली अंश	माफ खातेदार	प्रस्तावित व्यक्ती का नाम	विवरण
1	2	3	4	5	
1262	0.021	32	भरत लाल, इमामलाल परिधारी लाल, भजन लाल, देव लाल, मोहन लाल यां कारभार, दुर्गा इमरु फजाबू यां सांणू रामलाल, मदनलाल यां हाजरु यां यां जम.प्रकाश यां वेंकट यां सां मंडिभासारी	रामलाल, मदनलाल यां हाजरु सां मंडिभासारी	

सहायक
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