

PROGRESS REPORT

Kunde Hospital Rebuild (Main Block – no. 2)



Figure 1: The main hospital block after demolishing the external rock wall

Prepared and Submitted By:
Yangji Doma Sherpa
Project Coordinator (Nepal)
The Sir Edmund Hillary Foundation – Canada

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Background:

The massive earthquake of 7.8 magnitudes struck in Nepal on 25th April 2015, followed by series of aftershocks caused major structural damages at the buildings of Kunde Hospital. A team of Nepali structural engineers carried out a thorough assessment of the buildings in August and designed a plan to rebuild the outer stone masonry wall following seismic resistant codes.

The Sir Edmund Hillary Foundation – Canada is funding the construction of the largest block (main block - no. 2) of Kunde hospital. Reconstruction of the main block started on 1st of June 2016. A technical supervisor, construction supervisor and a team of builders were hired for the construction. A total of 32 builders are currently working at the construction site. So far, demolishing of the external rock wall, site clearance, excavation of the foundation, wall in the foundation, setting up of the D.P.C. layer and building stone masonry below the sill tie level has been completed.

Glimpses of the progress made so far

1. *Demolishing the external rock wall structure and site clearance:*



Figure 2: The outer rock wall structure of the building was scraped and demolished keeping the internal wooden structure intact.



Figure 3: The main hospital block after demolishing the external rock wall. Demolishing and site clearance work has been completed within few days. The outer silver cover is the insulation material, which has been kept intact.

2. Providing wood support to the internal structure



Figure 4: Wooden support system was setup for supporting the internal structure at the bottom, side, back and front (in picture) of the building during the construction.

3. Excavation and setting up the foundation of the building



Figure 5: Surprisingly, there was no foundation in the older structure. The rock wall of the building has been constructed above ground level. Thus, a new 3 feet depth and 2.5 feet width foundation was dug as per the instructions provided in the engineering design



Figure 6: Stones and cement has been used in the new foundation. Cement was not mentioned in the engineering design, but has been used to make it firmer as suggested by the engineers recently. Since there was no foundation in the previous structure, most of the stones were used in foundation. Luckily, we got 6 strong stonebreakers to break more stones, thus everything has been running smoothly.

4. Laying a D.P.C. (Damp proofing course) layer above the ground level



Figure 7: Workers weaving a D.P.C. tie beam with varied diameter iron rods following the instructions provided in the engineering design.



D.P.C. tie beam made out of iron rod

Figure 8: D.P.C. tie beam placed horizontally all round the building above the ground level. The D.P.C is 9-inches in height and 18-inches in breadth.



Figure 9: Workers making cement mortar combining a mixture of sand and cement for D.P.C.



Figure 10: Spreading and compacting cement mortar in the D.P.C. layer with a machine.

5. Building stone masonry wall with cement mortar up to the sill tie level



Figure 11: Worker shaping stone into appropriate shapes required for construction



A sill tie will be placed somewhere at this level

Stone masonry wall with cement mortar

D.P.C layer (made out of iron rod and cement mortar)

Figure 12: Building stone masonry wall with cement mortar as suggested in the design. It is currently ongoing and reached just below the sill tie level.