WORK EXPERIENCE UGANDA 2017

CLIENT:	*Amina Kara (Local drinks company)*
CONTRACTORS:	*Inova Limited Uganda*
PROJECT:	*Construction of a two-floor whisky and wine storage building*
LOCATION:	*Acacia Avenue, Kololo, Kampala, Plot no. 1A & 1C*
REFERENCE:	*Charles, Site Engineer, +256751315173, mcharles2064@gmail.com*

FOUNDATIONS AND GROUND FLOOR

The building was made from RC(stub) columns and beams. The columns were based on pad foundations. Due to the existing ground being sloped, the pads at the higher side of the structure (north end) were 1.4 metres deep from ground level and the pads at the lower end (south end) were at 3.1 meters. The plinth walls of the structure were based on stepped strip foundations in accordance with the slope and the location of the pad foundations. The walls were built using layers of blocks starting from the foundation's level going upwards. Hoop iron was placed in between every second alternate course of the blocks to provide extra strength to the walls. The blocks used for this construction project are stone blocks 500×230×150 mm

A site investigation had shown the 3.1 meter side of the site to have a lot of loose soil so under the pad foundations on that side, a layer of 500 mm thick hardcore was placed to make the base of the foundation stiffer. On top of the hardcore, layers of sand and aggregate were added and compacted before casting the pad footings. The layers of sand and aggregate were both 50 mm thick. The 1.5 meter side of the site was found to have adequate stiffness so the soil in this area only needed compacting before casting the pad foundations. Once the foundations were set, it was a matter of raising the ground to the needed level by adding and compacting clay soil to the site area. (A jumper compactor was used the compaction process). For a solid base, the soil was to be compacted every 150-200 mm layer of soil that was added

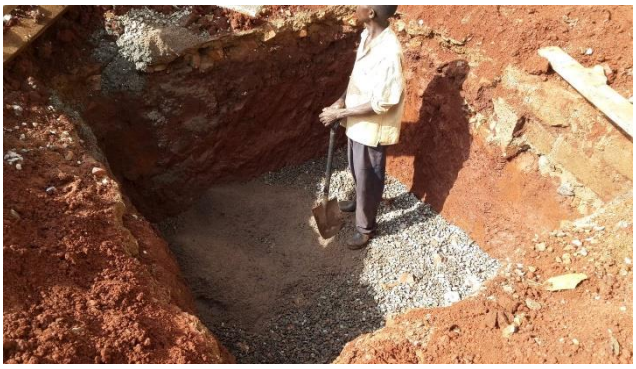
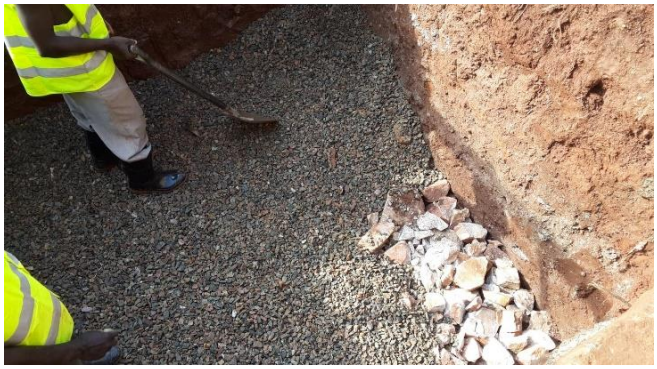
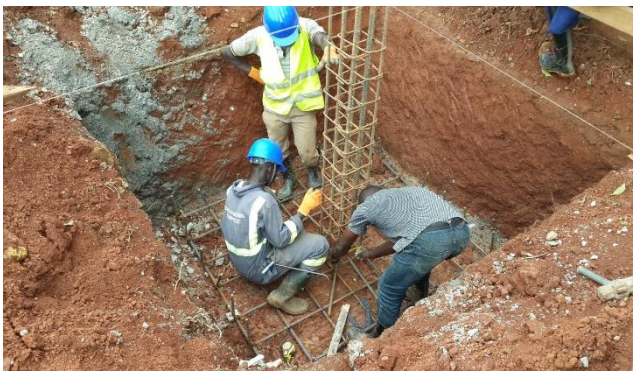
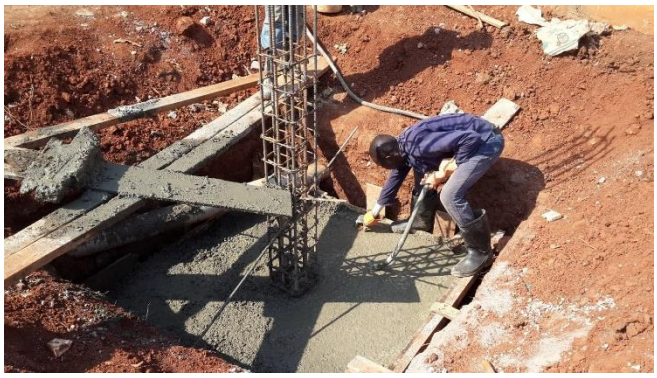
After the soil was compacted to the needed ground level, a 150 mm layer of hard core was added. On top of the hardcore a 50 mm layer of blinding was placed before a 150 mm thick concrete slab was casted on top. The concrete grade was 25 and it had a mesh with bars that were 8 mm in diameter (A1 42 British standard).

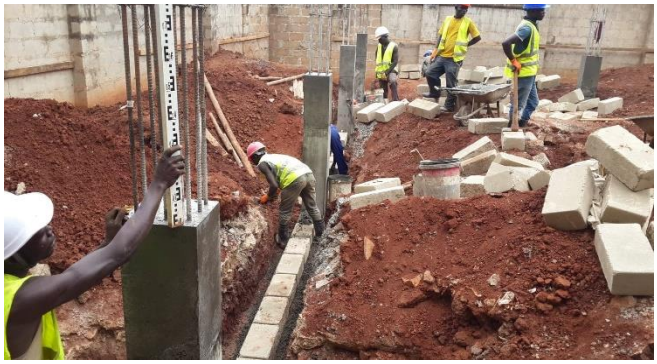
BEAMS AND COLUMNS

Ground beams were cast between the grid of columns that made up the internal frame work of the building. The positions of these beams were trenched out in the compacted ground soil with grooves 50 mm deep and 230 mm wide. A thin layer of concrete about 20 mm thick was poured into these grooves then a single layer of blocks was added. The layer of blocks provided a base for the beams to be cast.

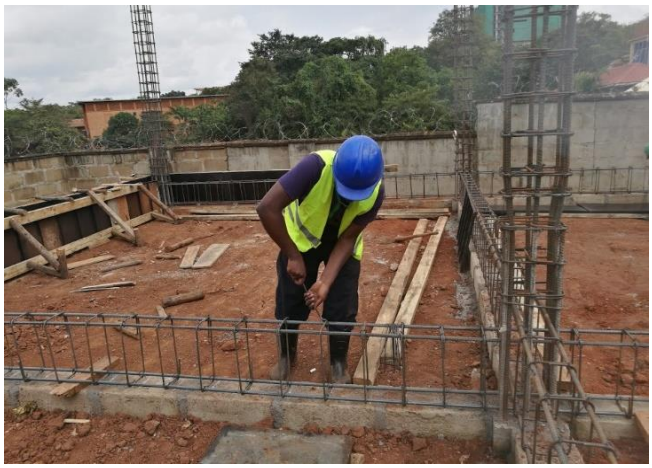
The columns cast in the plinth used longitudinal bars that were 16 mm in diameter and stirrups 8 mm in diameter. There was also middle links to the column reinforcement 8 mm in diameter. The spacing between the links was 150 mm. The beams cast for the floor grid had longitudinal bars 16 mm in diameter and stirrups 8 mm in diameter at 200 mm spacing. The cross section of the columns was 300×300 mm. The beams cast were 450 mm deep and 230 mm wide. The grade of the concrete used for the beams and columns was 25.

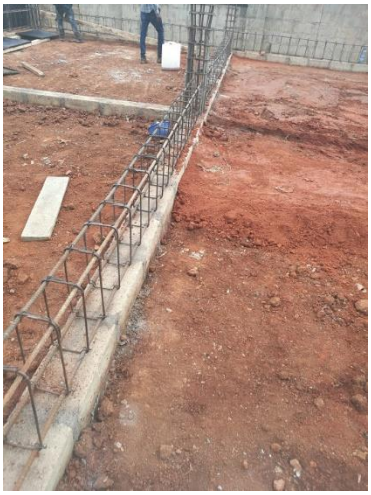
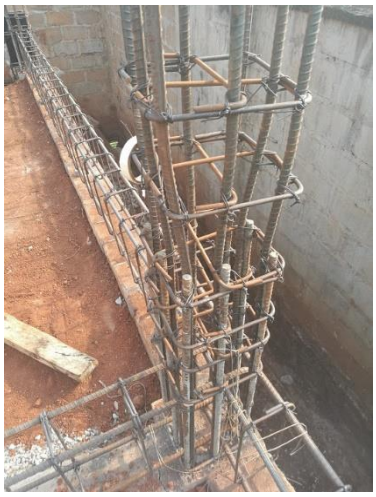
Casting the pad Foundations

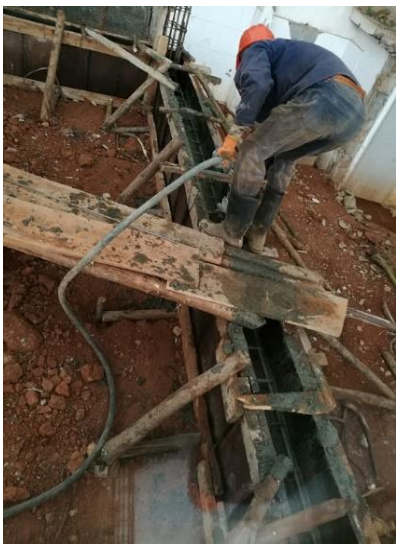


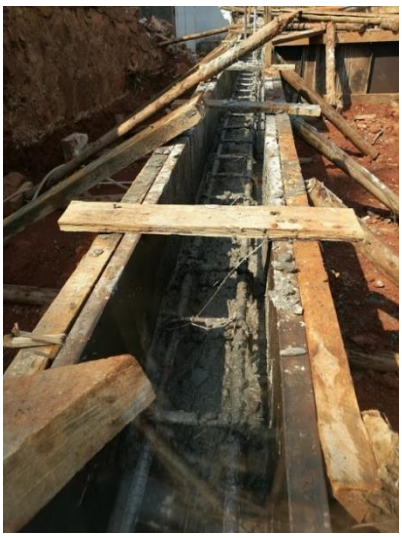
Setting up the beam and column reinforcement

Casting the beams and Levelling the ground with type 1 hardcore






Casting the Columns